

Standard Product Guide



BUILDING & GARDEN SUPPLIES
— **est. 1972** —

Suppliers of Quality Cast Stone Products

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Site A, Storage, 180 Rupert St, Nechells, Birmingham B7 5DT



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As the name suggests, our semi dry stone is manufactured using a low water content, or 'semi dry' mixture of high quality fine natural aggregates, colouration pigments and additives.

Semi dry stonework has an open, slightly rough texture, akin to natural or sawn stone. This is often preferred when the requirement is to match existing natural stone, or a more natural, textured look is required.

All our semi dry products are 'through coloured' - meaning that no separate facing or core material is used (as some manufacturers do) and the same colour can be seen throughout the unit.

During our manufacturing process, precise and consistent measurements of material are graded and premixed, prior to being compacted into handmade timber moulds. Additives containing water/frost proofing and binding agents are also added to ensure our products can withstand all weather conditions.

One of the benefits of semi dry material is that the item being cast can be taken out of the mould almost immediately, allowing the curing process to begin and the next item to be cast straight away. This is especially suited to high

volumes of repetitive items - meaning lead times can be greatly reduced in some cases.

Once removed from the mould, all our semi dry products are immediately moved into our water vapour curing chamber. The high humidity within the chamber helps to slow down the curing process and results in much harder stone, less prone to breakages.

Semi dry material is also very cost effective in comparison to other available materials.

All our products are designed and manufactured in accordance with BS1217.

Benefits of Semi Dry Stone

- Cost Effective
- Reduced Lead Times
- Natural Texture

Specification

Strength: $>28\text{N/mm}^2$

Typical Density: 2000Kg/m^3

Drying Shrinkage: $<0.04\%$

Water Absorption: 0.95mg/mm^2

Standard Colours:



Bath



Portland



Cheshire



York

Wetcast Stone

Wetcast stone is the strongest of our available materials. Produced using a high water content mixture, the resulting product is incredibly durable and can be cast into elaborate shapes and designs.

Another huge benefit of wetcast stone is the ability to add reinforcement, allowing for much larger pieces to be cast, meaning less mortar jointing.

Where the requirement is for a structural, self supporting or load bearing product, our wetcast material can also be utilised to negate the need for additional supporting lintels, or unsightly steelwork that may be visible.

A wetcast mould can only be used once a day, hence the manufacturing process can sometimes take longer than other, faster to produce materials. However, lower volume runs of casts using our standard moulds can still be delivered to site in short lead times.

The mould is filled with a wet mixture that is poured in and left to 'go off' overnight. As with concrete, a chemical reaction occurs that causes the materials to bond and harden. The result is a highly dense material with a strength or more than 45N/mm².

Once cast, all our wetcast products are moved to our finishing department, where the pieces are acid etched and washed down to reveal the final texture and finish.

All our products are designed and manufactured in accordance with BS1217.

Benefits of Wetcast Stone

- Can be produced in large pieces
- Very dense and strong, suitable for structural/load bearing applications
- Smoother Texture
(In comparison to semi dry)

Specification

Strength: >45N/mm²

Typical Density: 2500Kg/m³

Drying Shrinkage: <0.04%

Water Absorption: 0.09mg/mm²

Standard Colours:



Bath



Portland

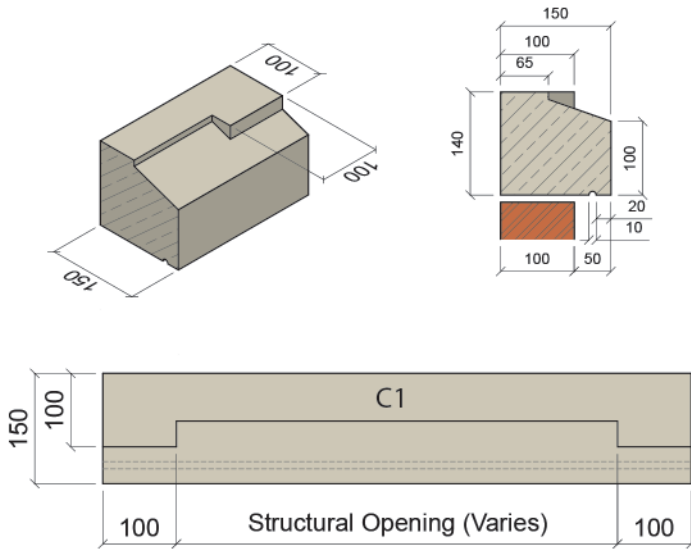


Cheshire

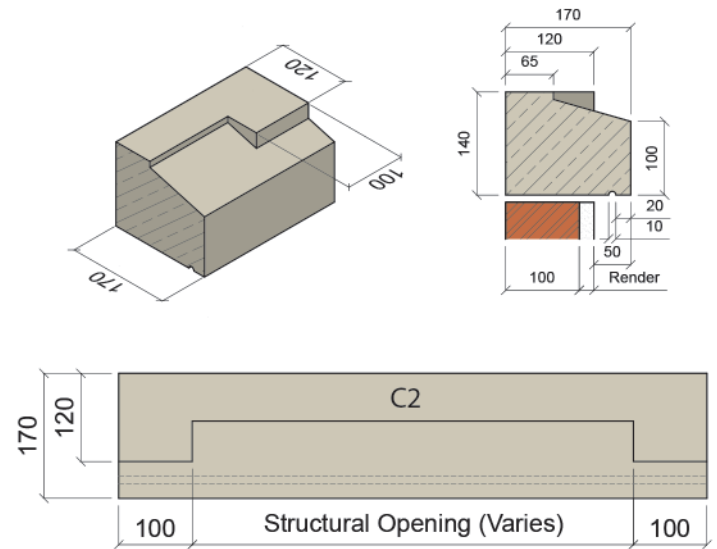


York

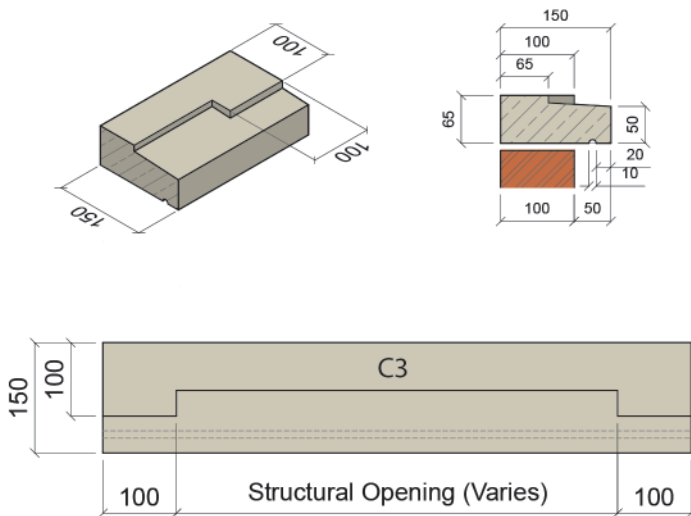
C1 Stooled Cill, 150x140 Section (Brickwork)



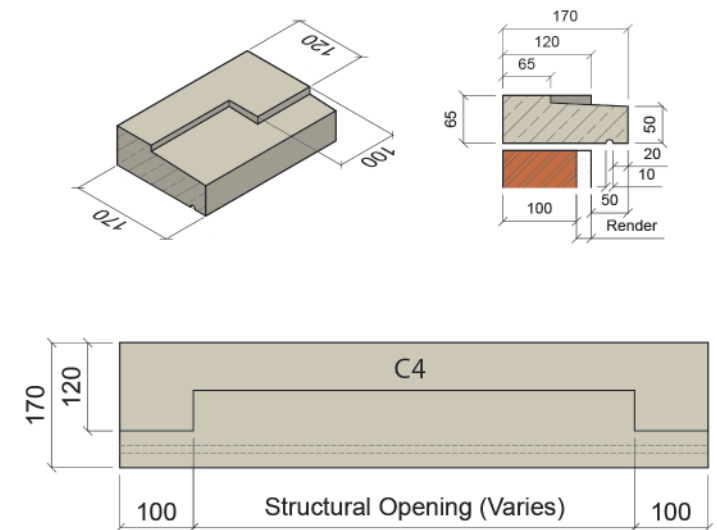
C2 Stooled Cill, 170x140 Section (Render)



C3 Stooled Cill, 150x65 Section (Brickwork)

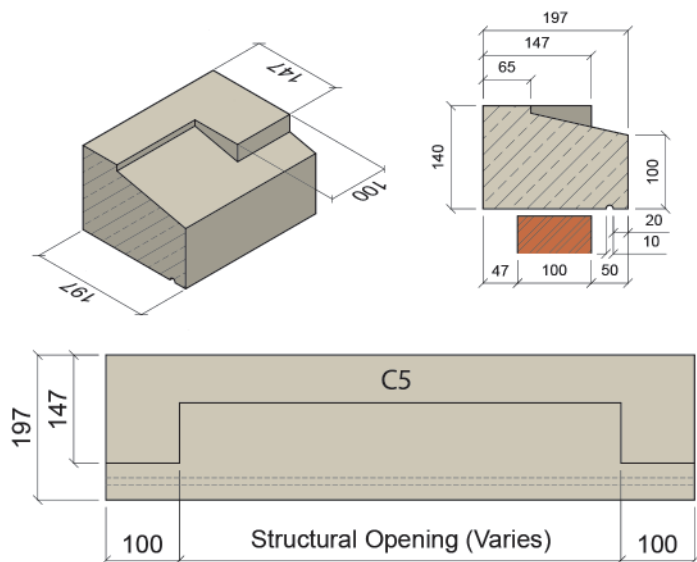


C4 Stooled Cill, 170x65 Section (Render)

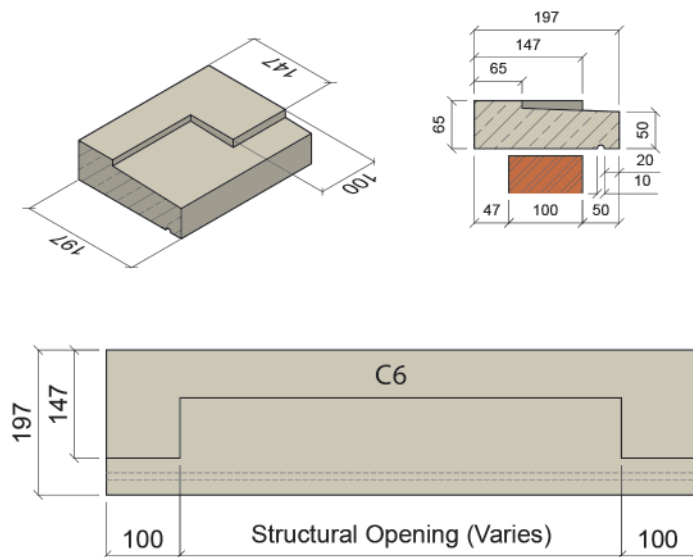


Stooled Cills

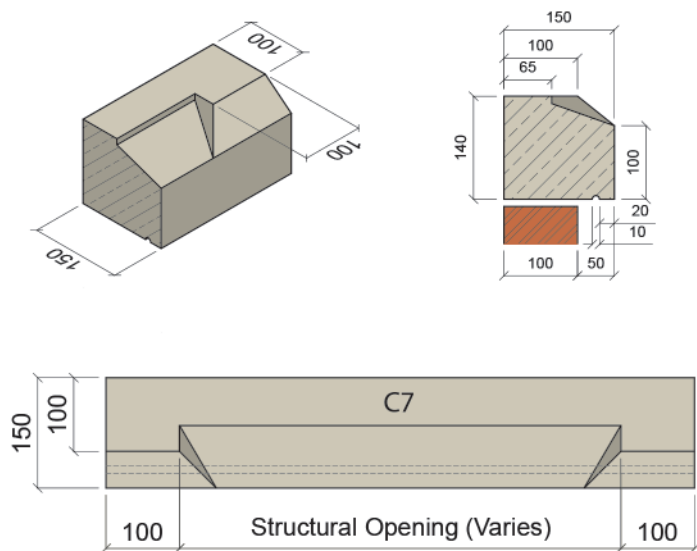
C5 Stooled Cill, 197x140 Section (Sliding Sash Window)



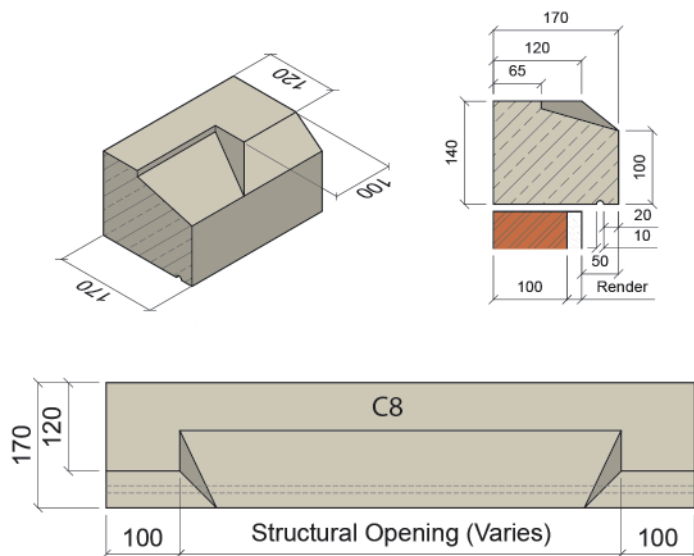
C6 Stooled Cill, 197x65 Section (Sliding Sash Window)



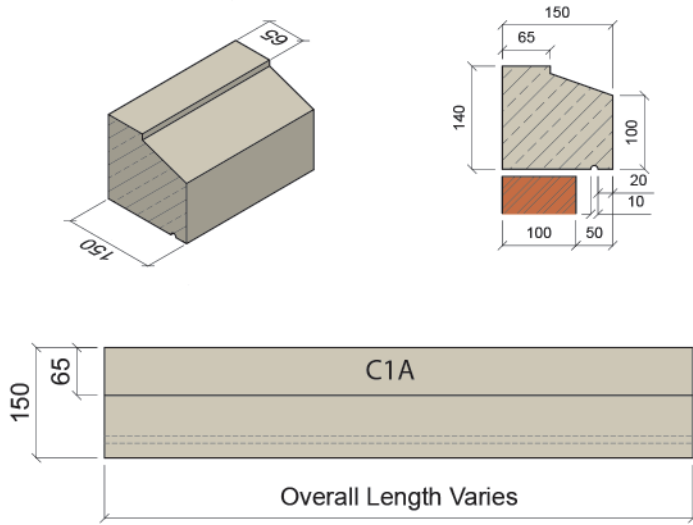
C7 Chamfered Stooled Cill, 150x140 Section (Brickwork)



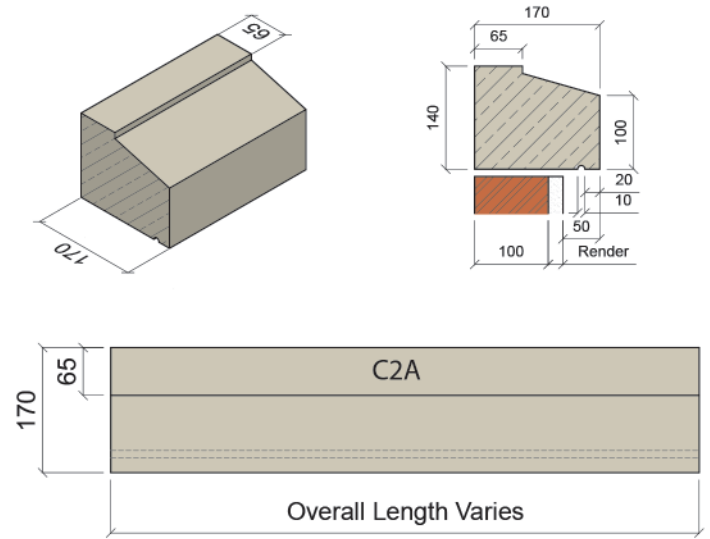
C8 Chamfered Stooled Cill, 170x140 Section (Render)



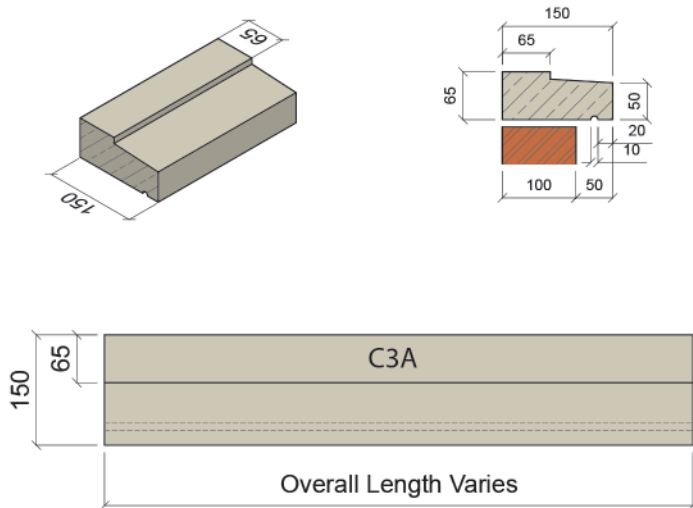
C1A Slip Cill, 150x140 Section (Brickwork)



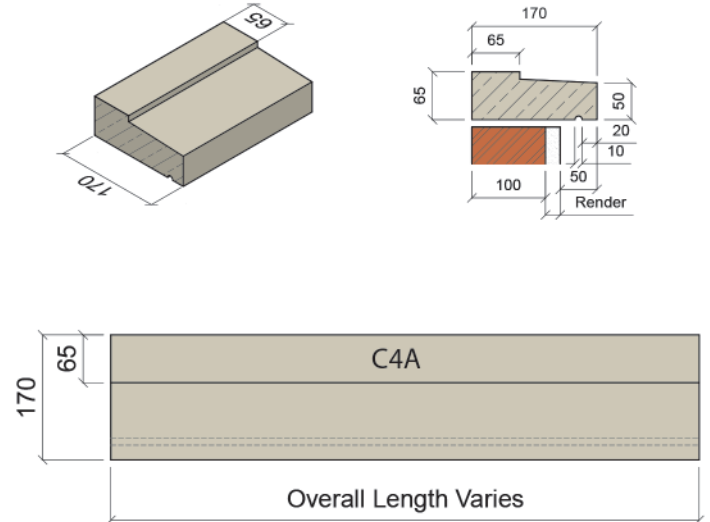
C2A Slip Cill, 170x140 Section (Render)



C3A Slip Cill, 150x65 Section (Brickwork)

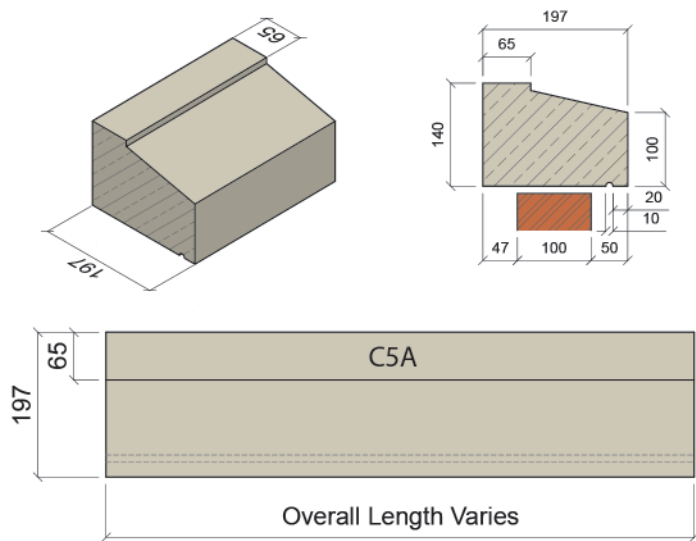


C4A Slip Cill, 170x65 Section (Render)

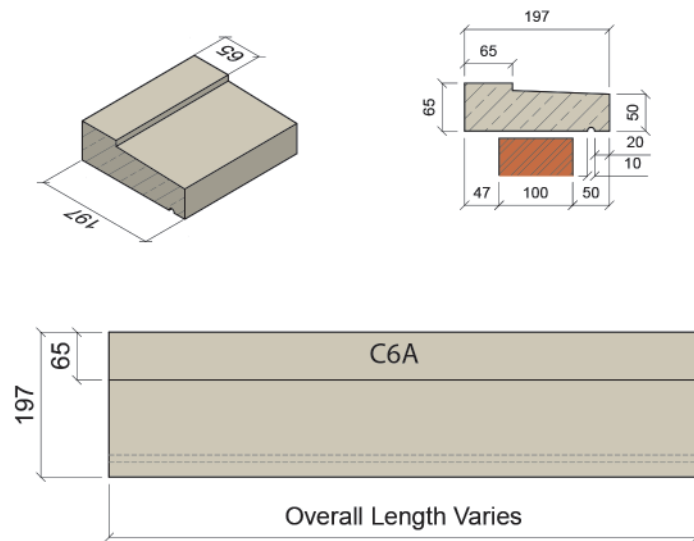


Slip Cills

C5A Slip Cill, 197x140 Section (Sliding Sash Window)



C6A Slip Cill, 197x65 Section (Sliding Sash Window)



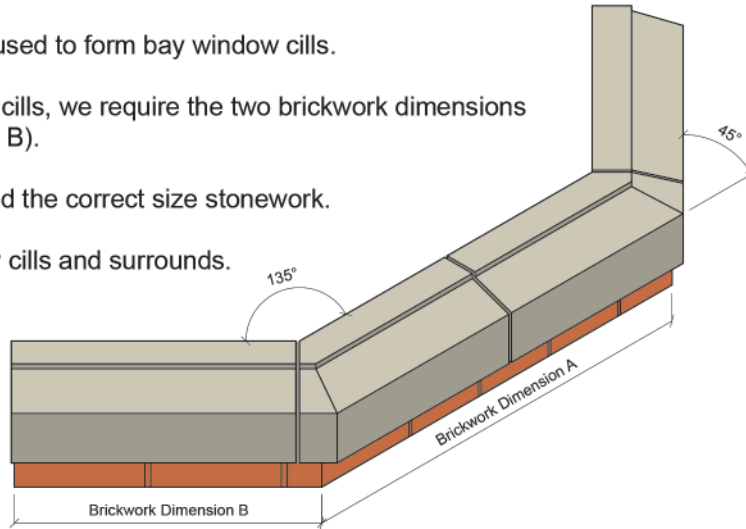
45° Bay Window Cill

Any of our cill profiles can be used to form bay window cills.

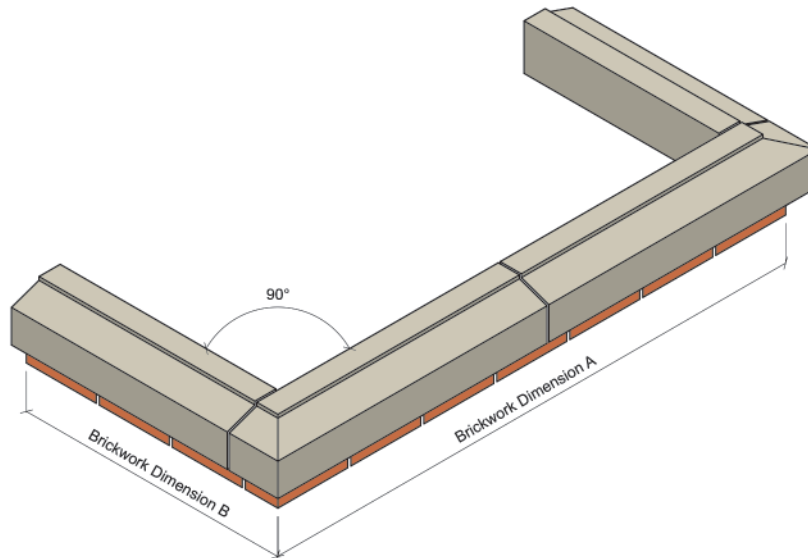
For the costing of bay window cills, we require the two brickwork dimensions shown below (Dimensions A & B).

Our sales team will recommend the correct size stonework.

We also produce bespoke bay cills and surrounds.

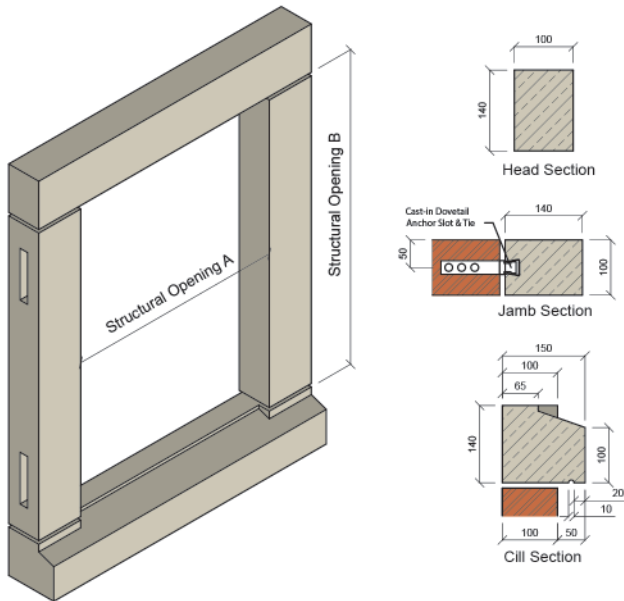


90° Bay Window Cill

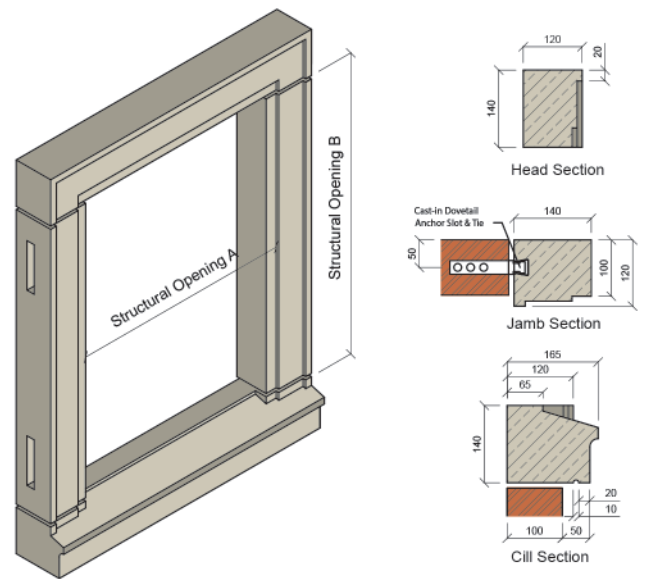


Window Surrounds

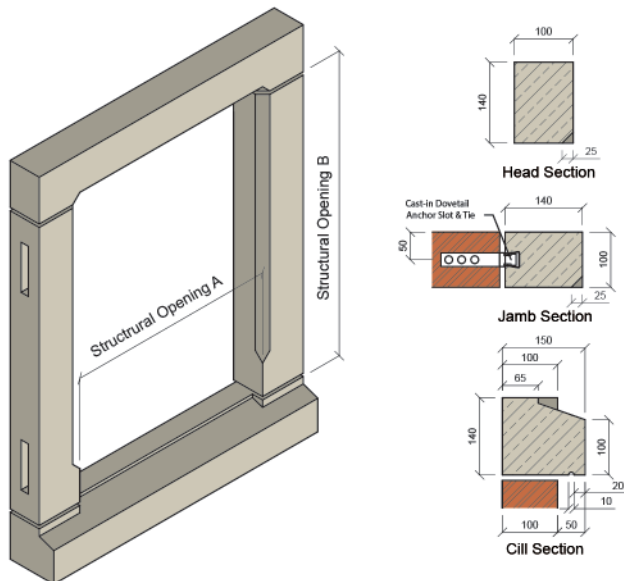
Plain Window Surround



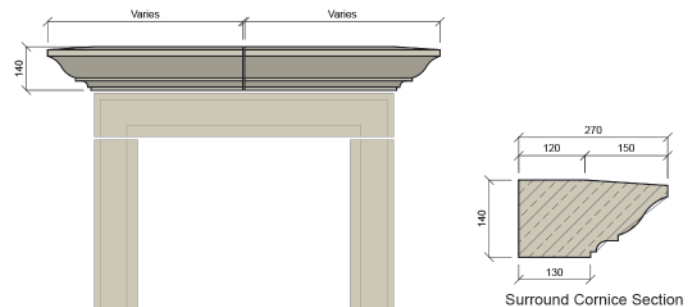
Moulded Window Surround



Chamfered Window Surround

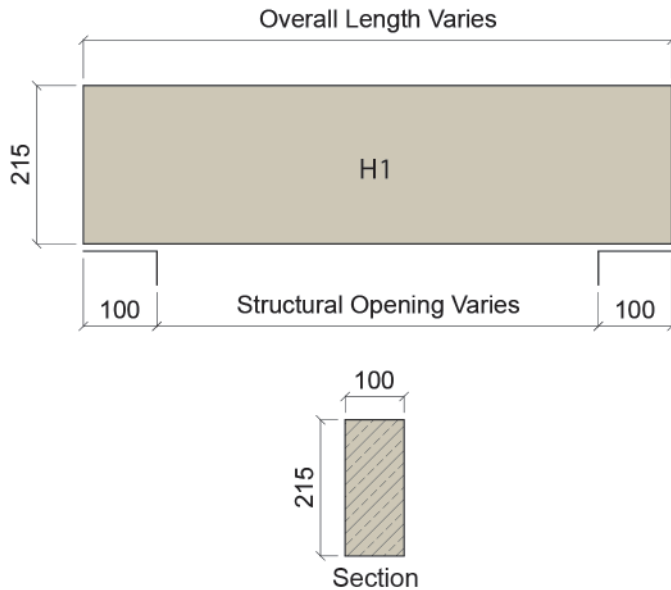


Window Surround Cornice (Optional)

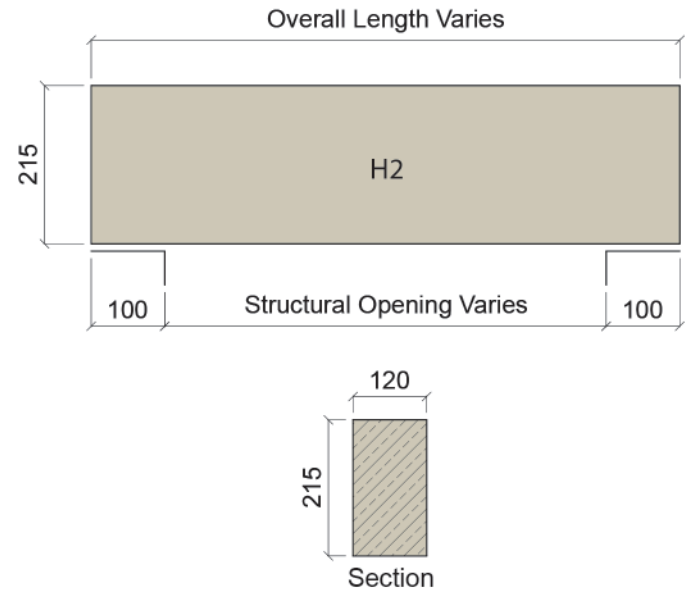


Window Heads

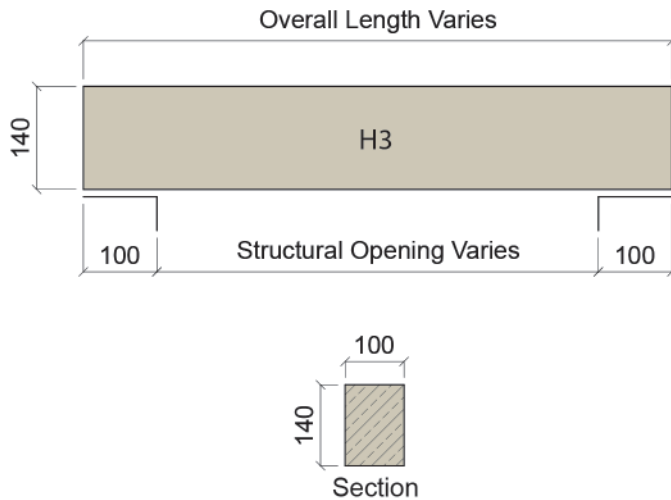
H1 Plain Head, 100x215 Section (Brickwork)



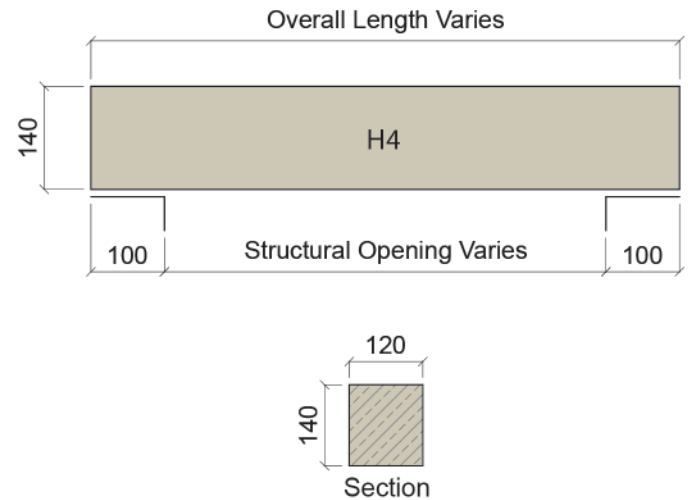
H2 Plain Head, 120x215 Section (Render)



H3 Plain Head, 100x140 Section (Brickwork)

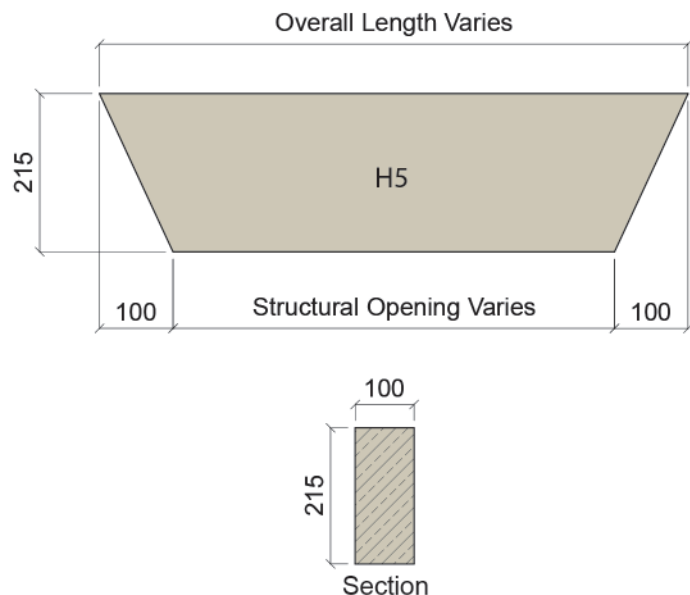


H4 Plain Head, 120x140 Section (Brickwork)

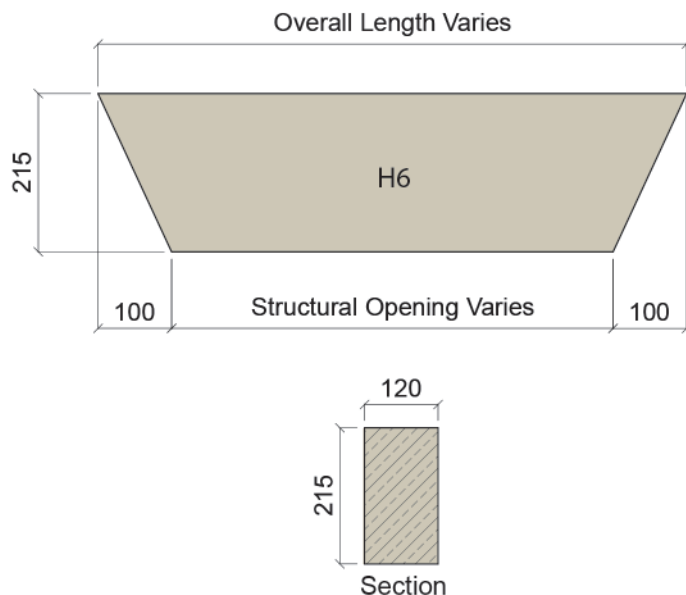


Window Heads

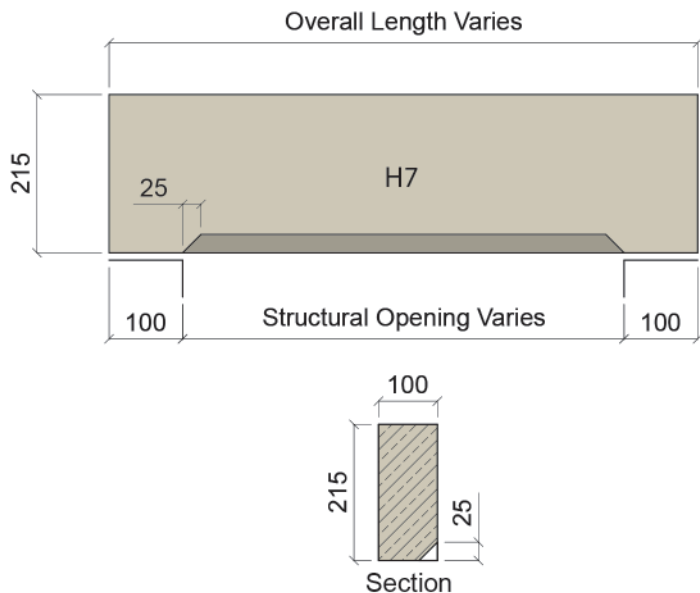
H5 Splayed Head, 100x215 Section (Brickwork)



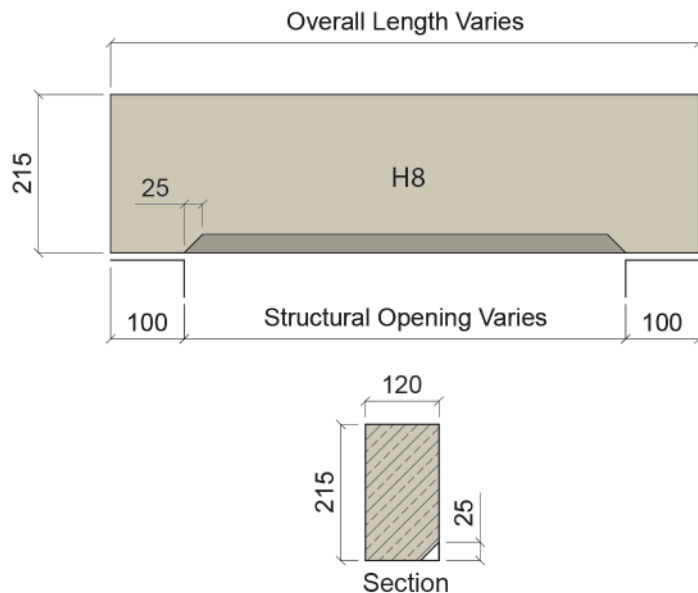
H6 Splayed Head, 120x215 Section (Render)



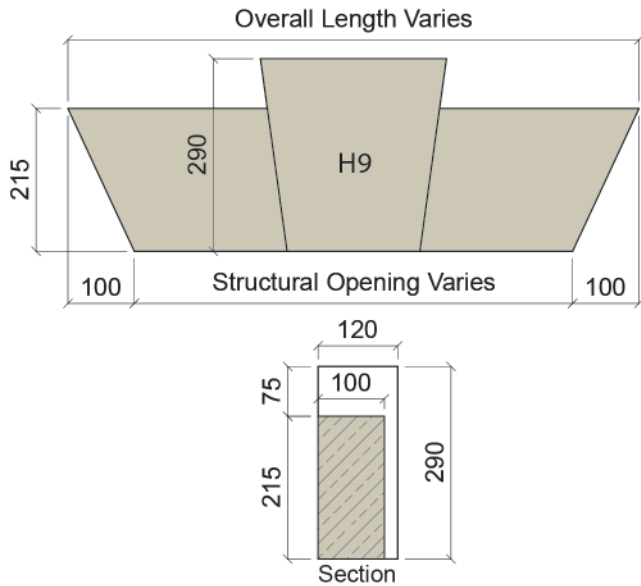
H7 Chamfered Head, 100x215 Section (Brickwork)



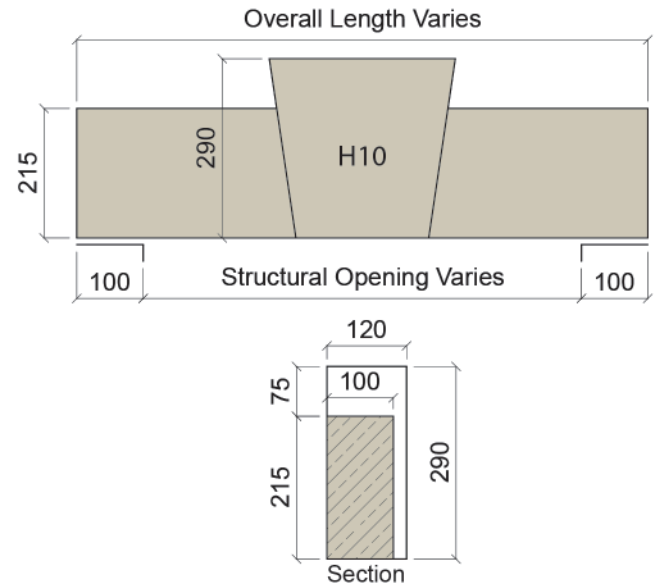
H8 Chamfered Head, 120x215 Section (Render)



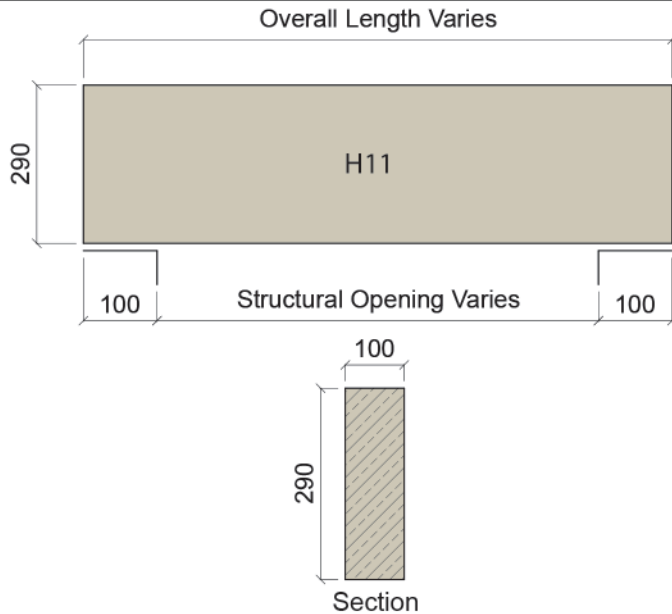
H9 Splayed Keystone Head (Brickwork)



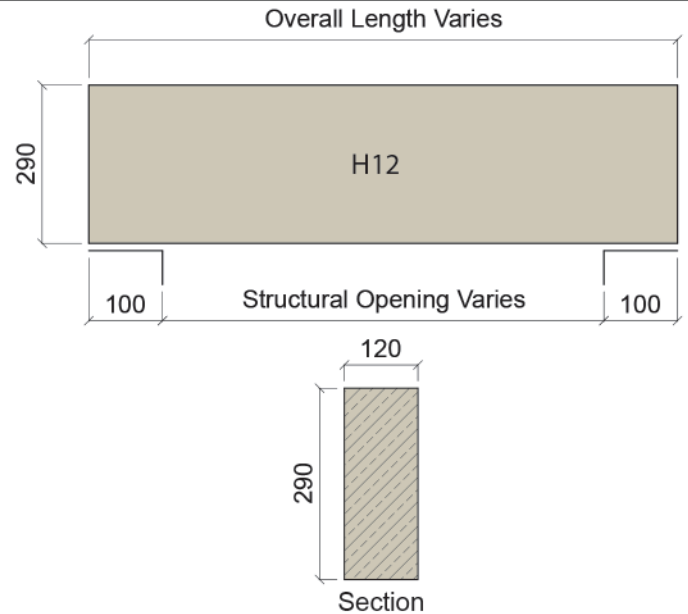
H10 Square Keystone Head (Brickwork)



H11 Plain Head, 100x290 Section (Brickwork)

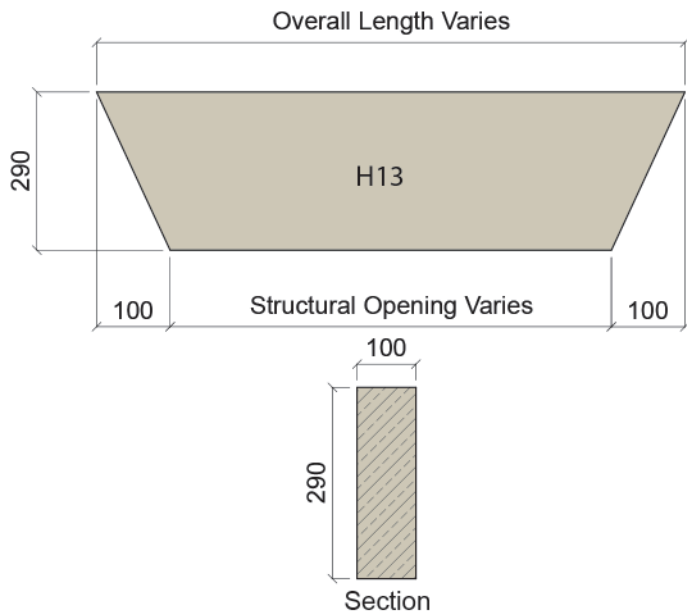


H12 Plain Head, 120x290 Section (Render)

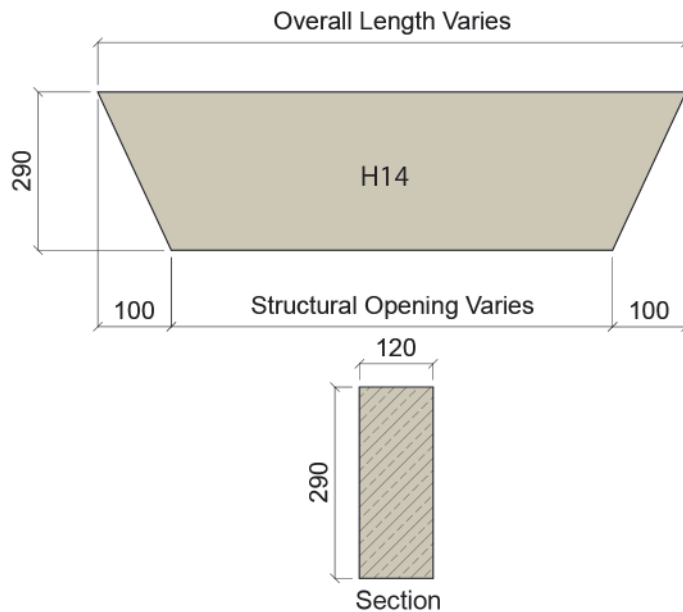


Window Heads

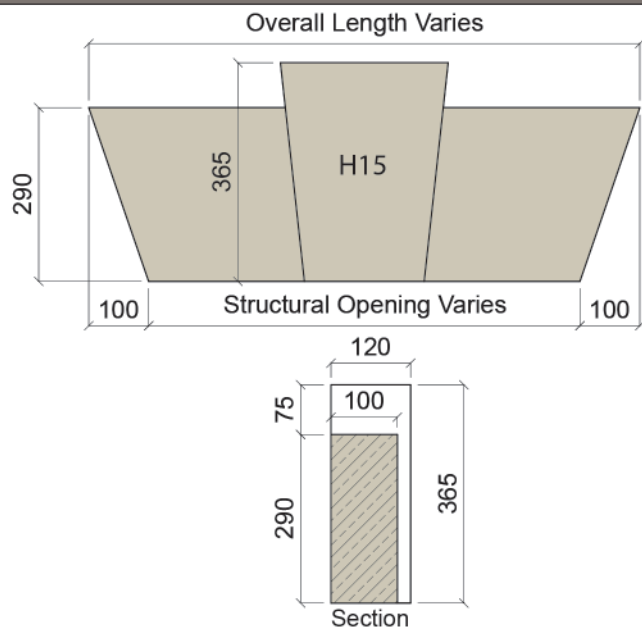
H13 Splayed Head, 100x290 Section (Brickwork)



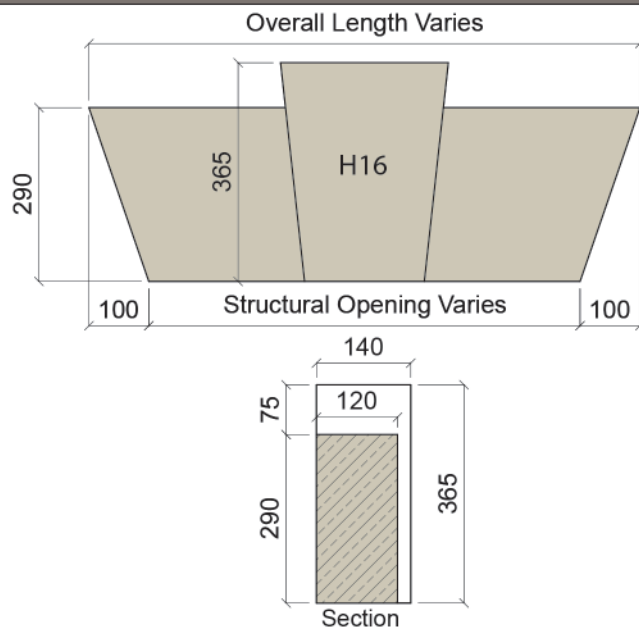
H14 Splayed Head, 120x290 Section (Render)



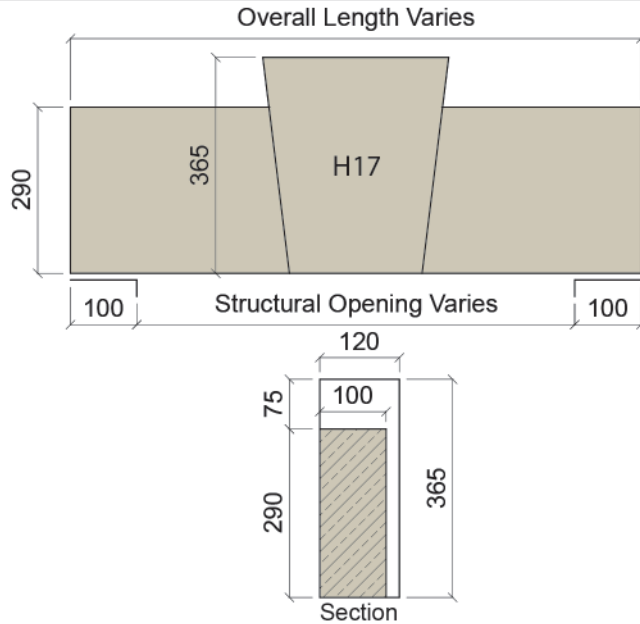
H15 Splayed Keystone Head, 100x290 Section (Brickwork)



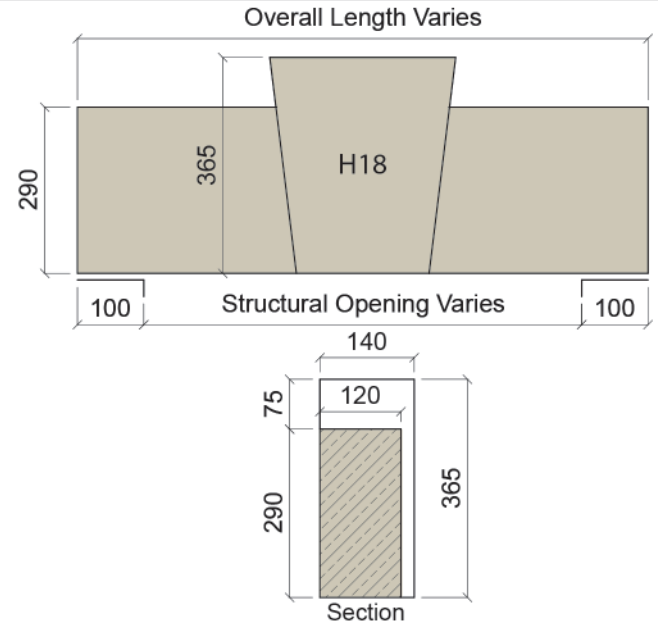
H16 Splayed Keystone Head, 120x290 Section (Render)



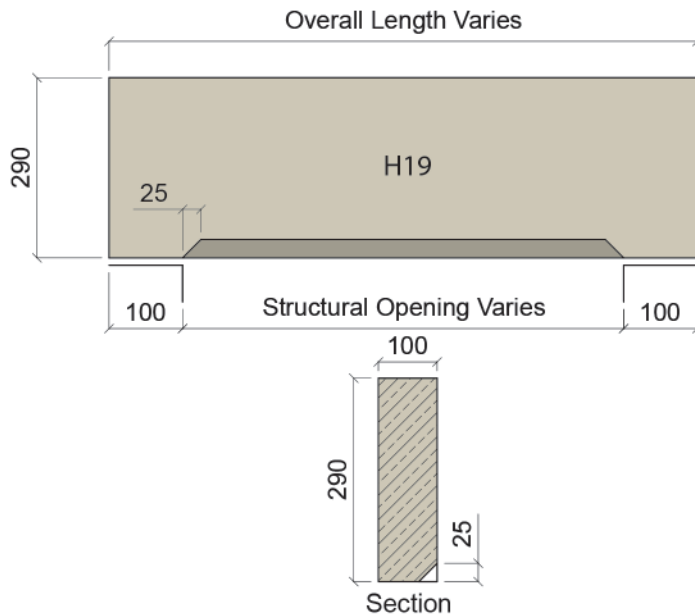
H17 Square Keystone Head (Brickwork)



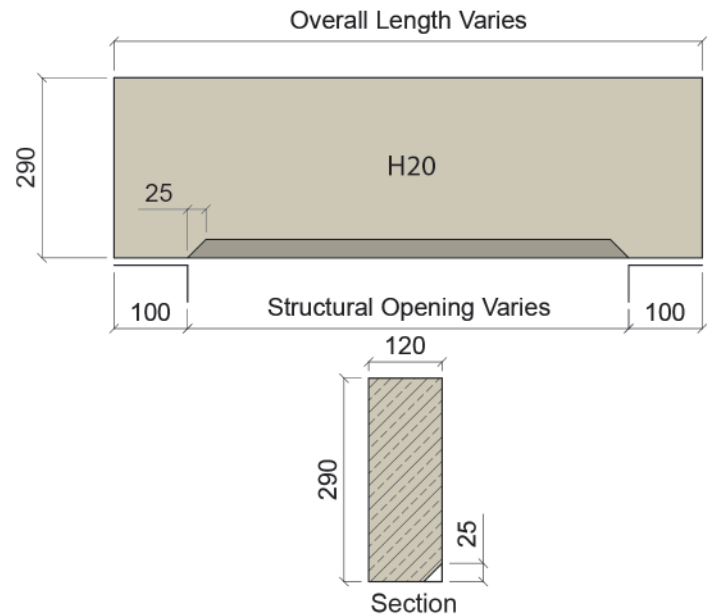
H18 Square Keystone Head (Render)



H19 Chamfered Head 100x290 Section (Brickwork)

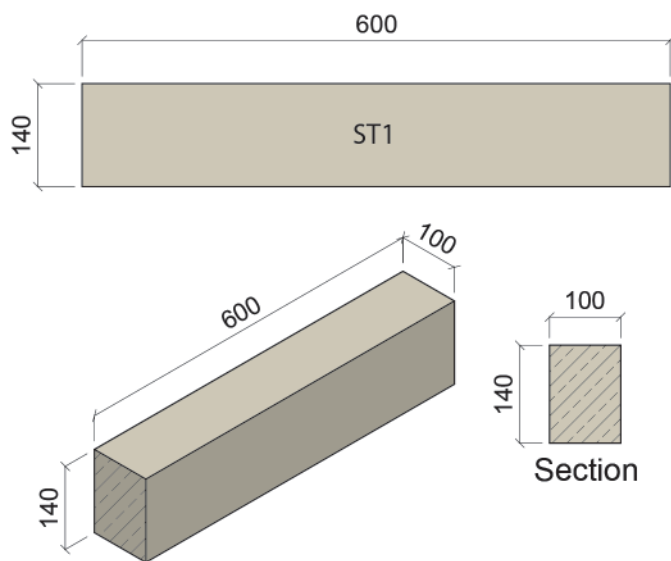


H20 Chamfered Head 120x290 Section (Render)

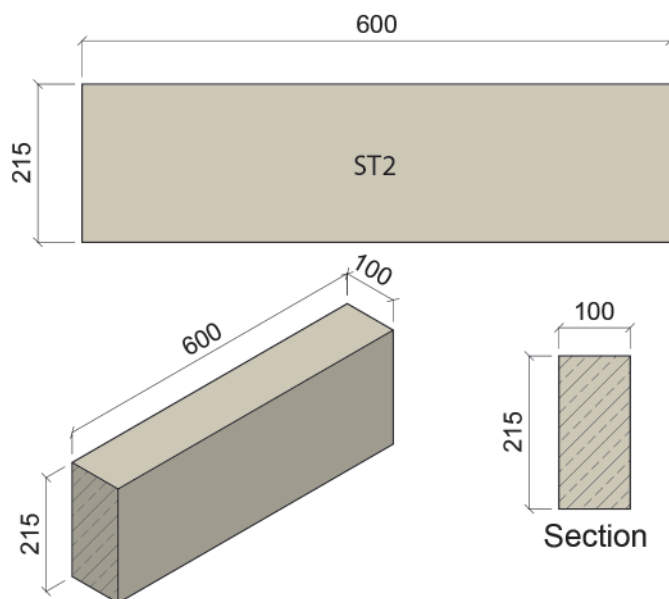


Band & String Course

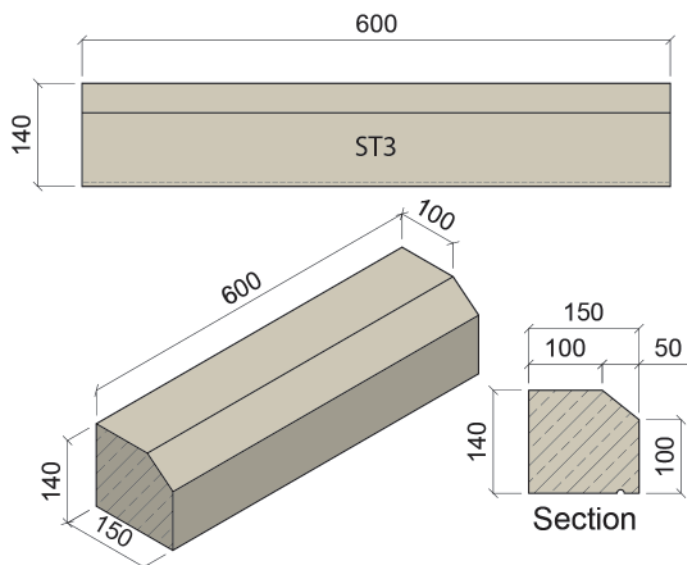
ST1 Plain Band Course, 100x140 Section (Brickwork)



ST2 Plain Band Course, 100x215 Section (Brickwork)

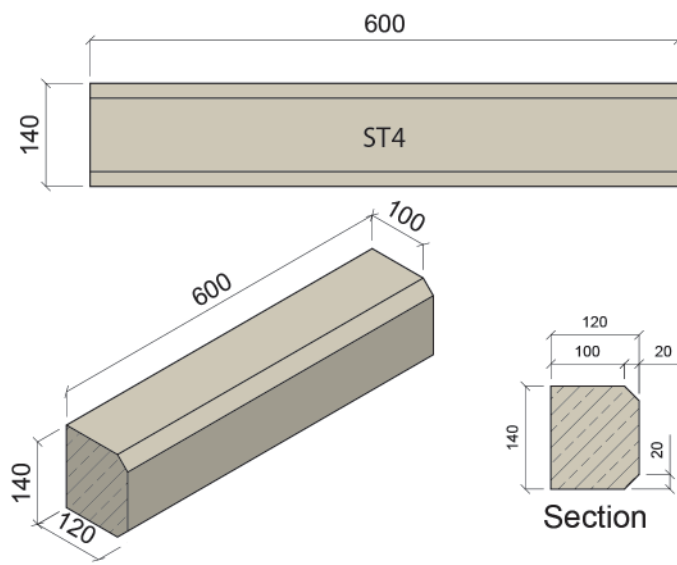


ST3 Chamfered Band Course, 150x140 Section (Brickwork)



Return units also available

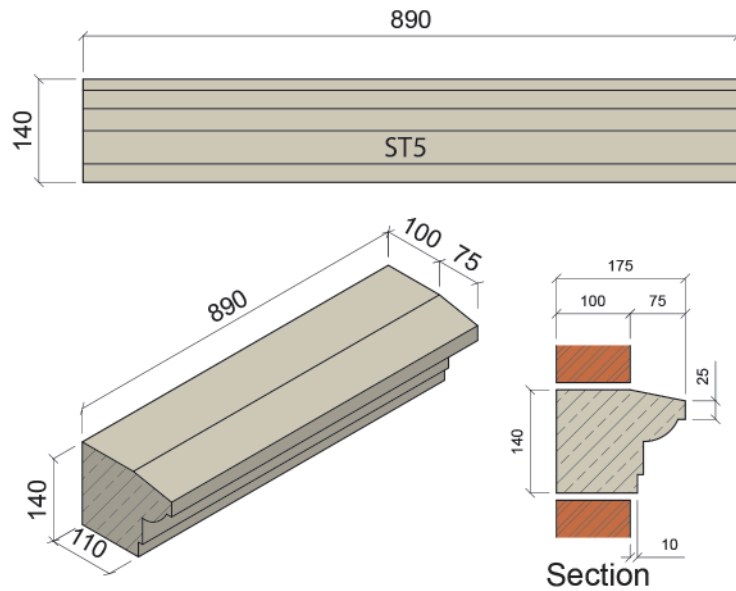
ST4 Chamfered Band Course, 120x140 Section (Brickwork)



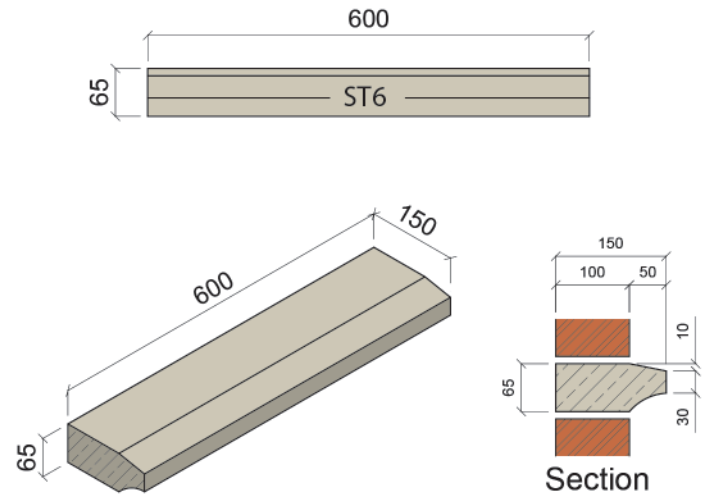
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Band & String Course

ST5 Moulded String Course, 175x140 Section (Brickwork)

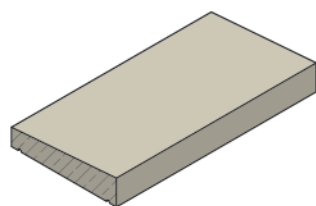
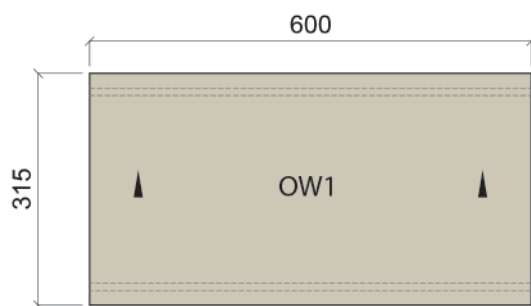


ST6 Moulded String Course, 150x65 Section (Brickwork)

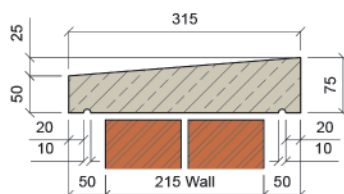


Coping

OW1 Once Weathered Coping, 315x75/50mm Section

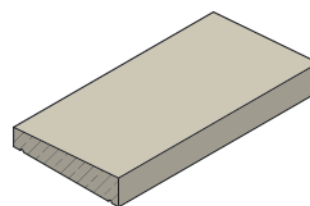
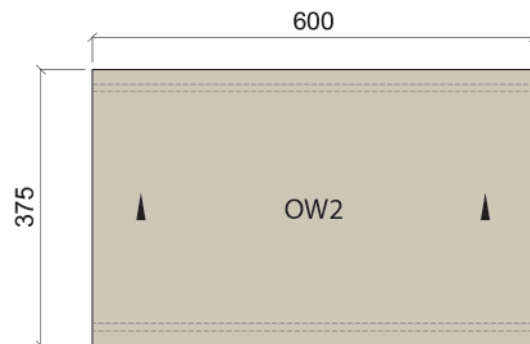


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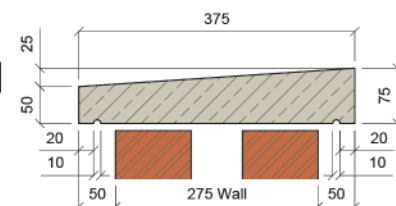


Section

OW2 Once Weathered Coping, 375x75/50mm Section

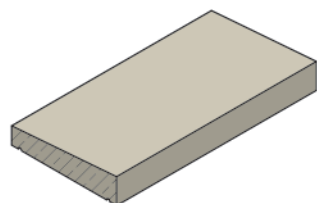
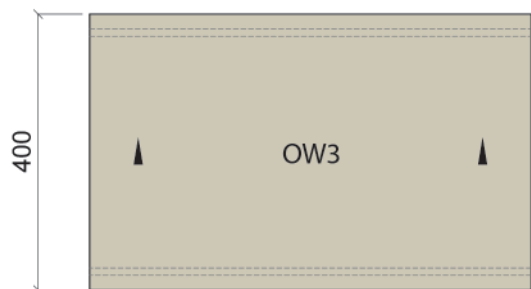


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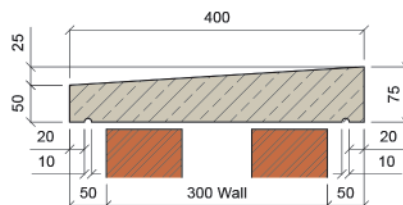


Section

OW3 Once Weathered Coping, 400x75/50mm Section

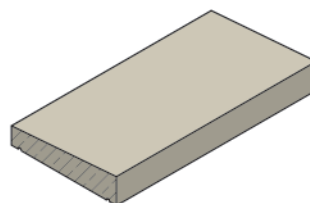
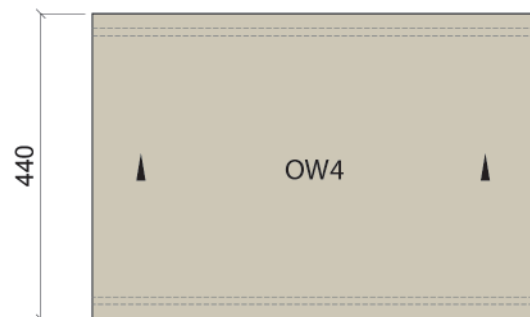


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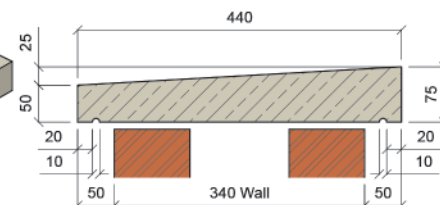


Section

OW4 Once Weathered Coping, 440x75/50mm Section

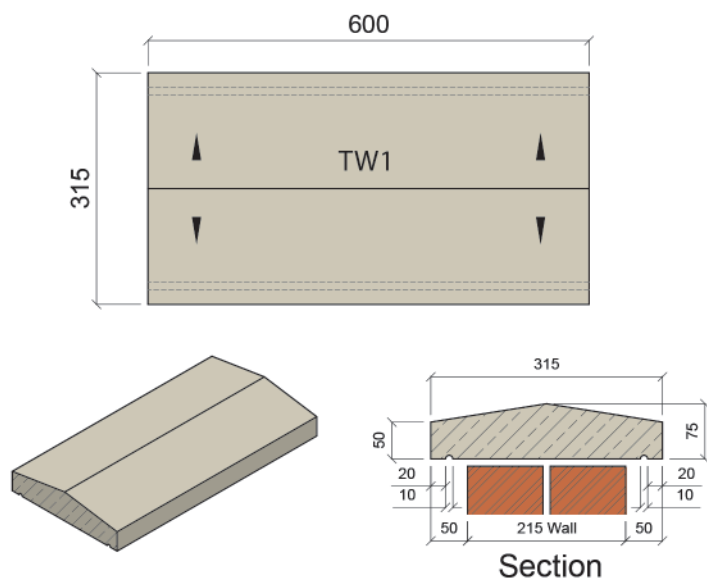


Return units also available



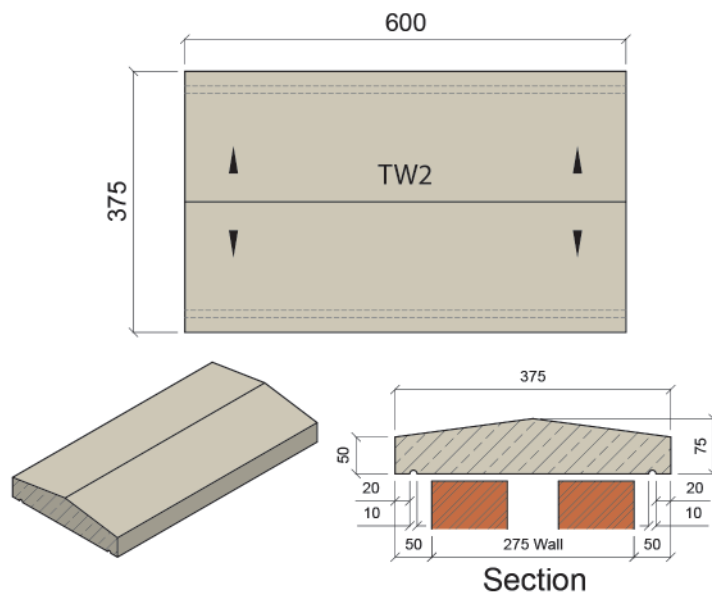
Section

TW1 Twice Weathered Coping, 315x75/50mm Section



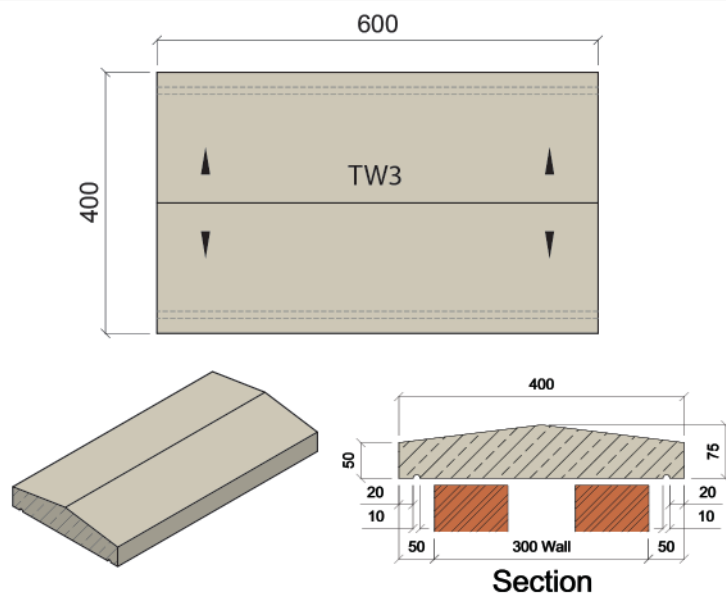
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TW2 Twice Weathered Coping, 375x75/50mm Section



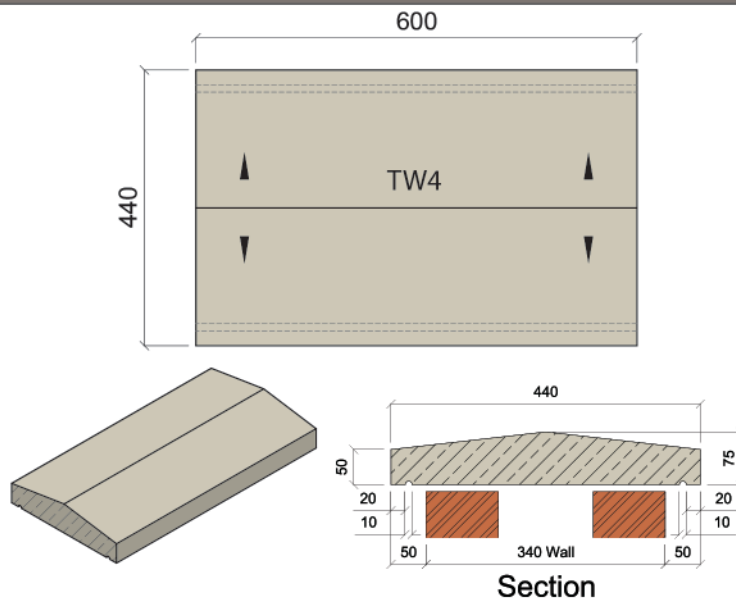
Return units also available

TW3 Twice Weathered Coping, 400x75/50mm Section



Return units also available

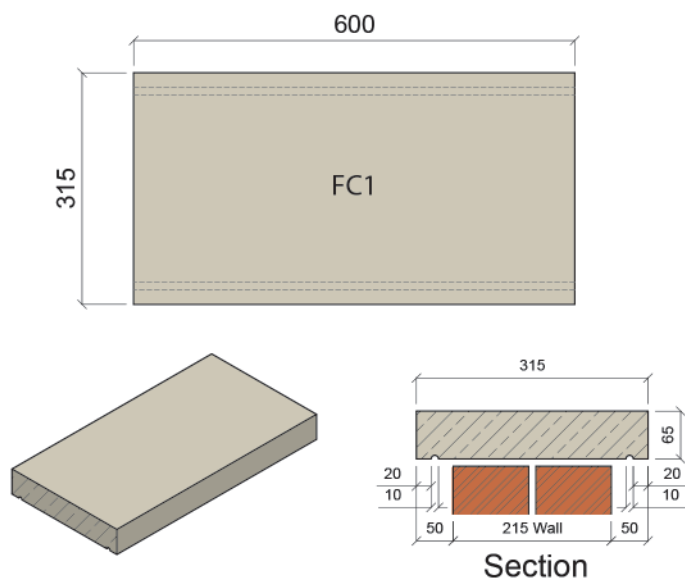
TW4 Twice Weathered Coping, 440x75/50mm Section



Return units also available

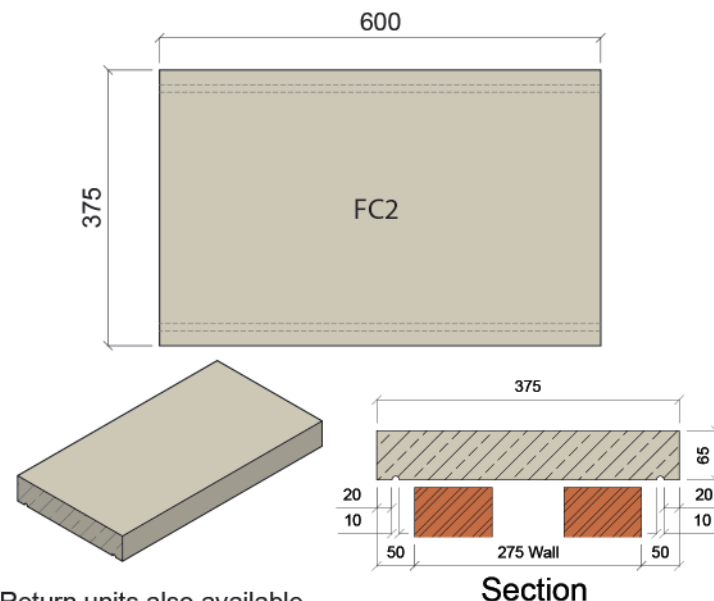
Coping

FC1 Flat Coping, 315x65mm Section



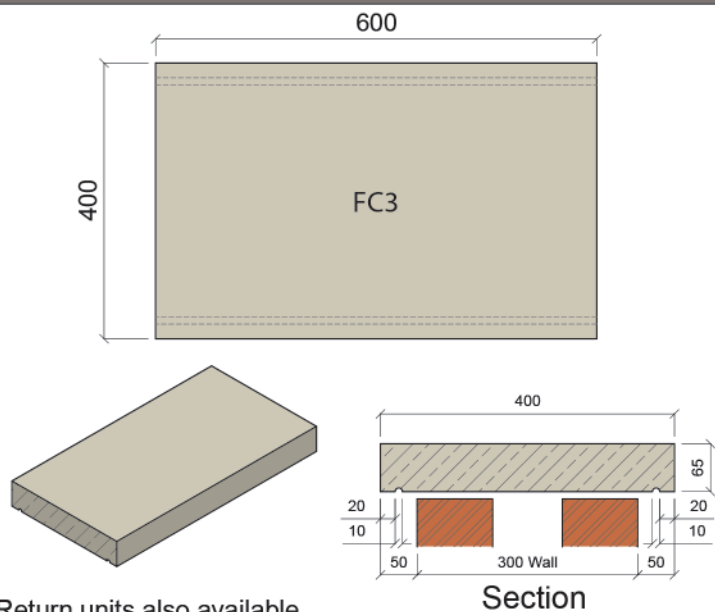
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FC2 Flat Coping, 375x65mm Section



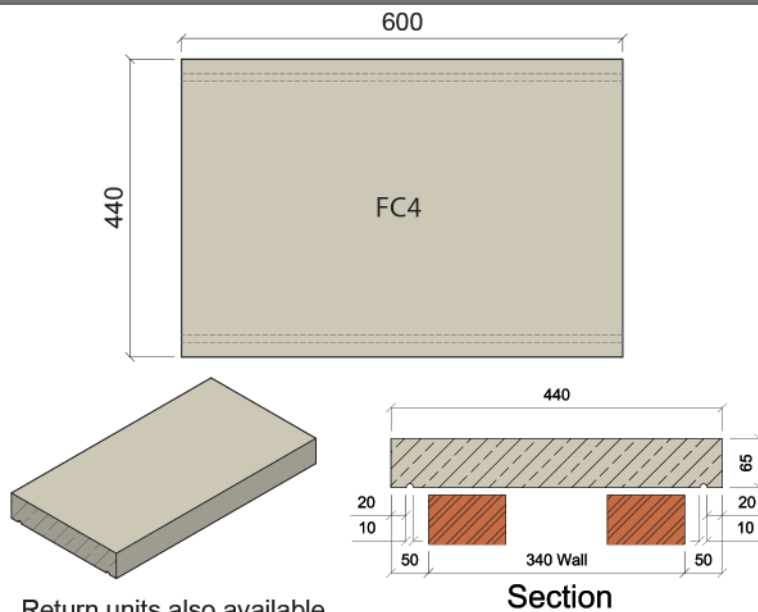
Return units also available

FC3 Flat Coping, 400x65mm Section



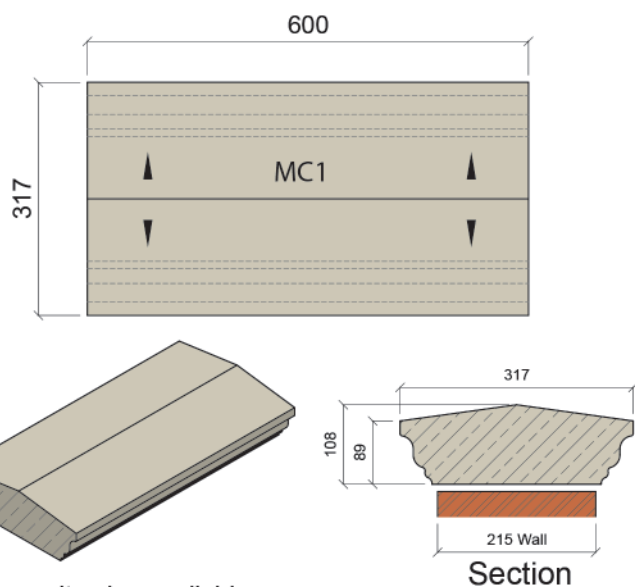
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FC4 Flat Coping, 440x65mm Section



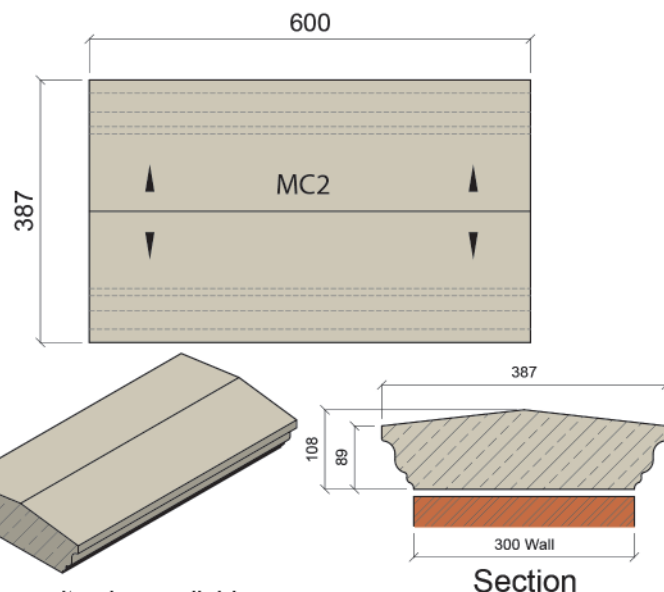
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MC1 Moulded TW Coping, 317x108/89mm Section



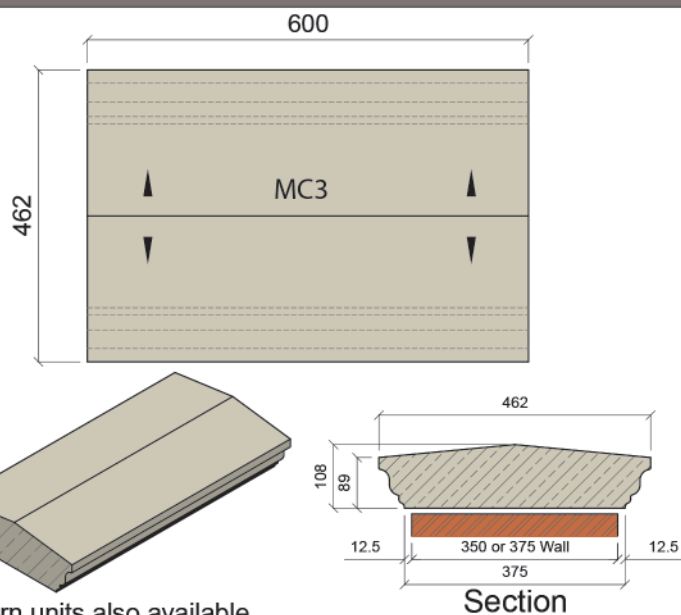
Return units also available

MC2 Moulded TW Coping, 387x108/89mm Section



Return units also available

MC3 Moulded TW Coping, 462x108/89mm Section

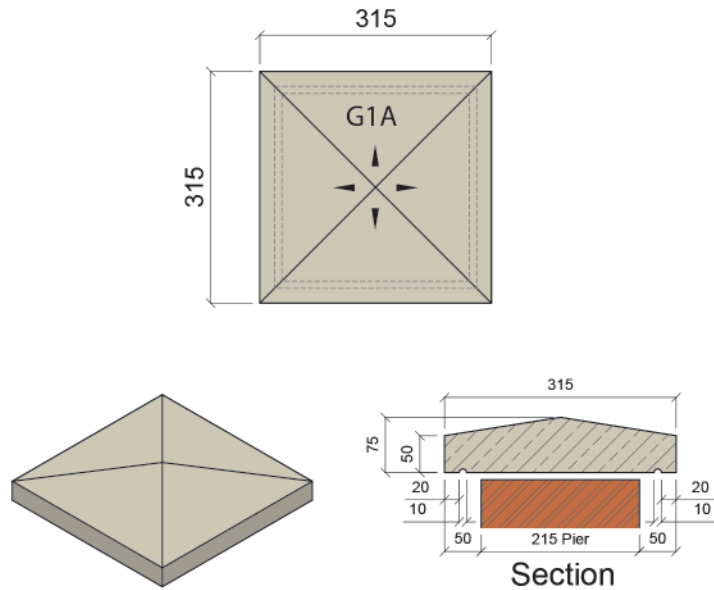


Return units also available

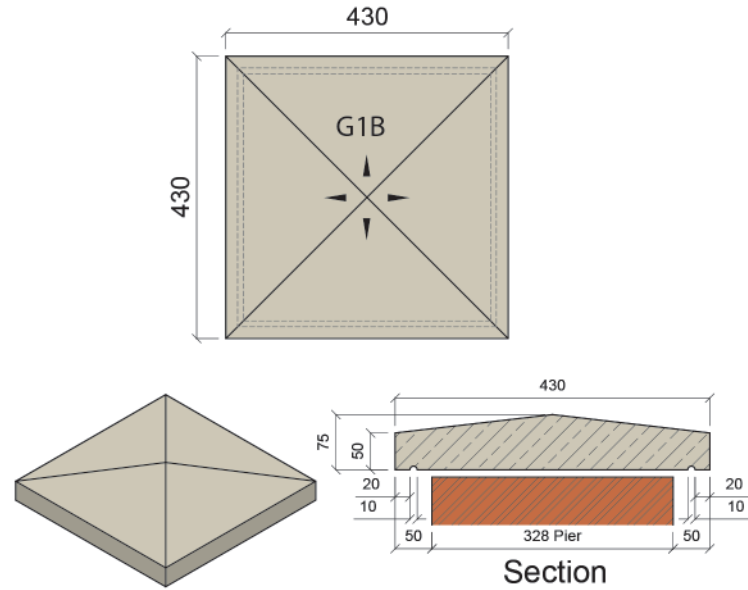


Pier Caps

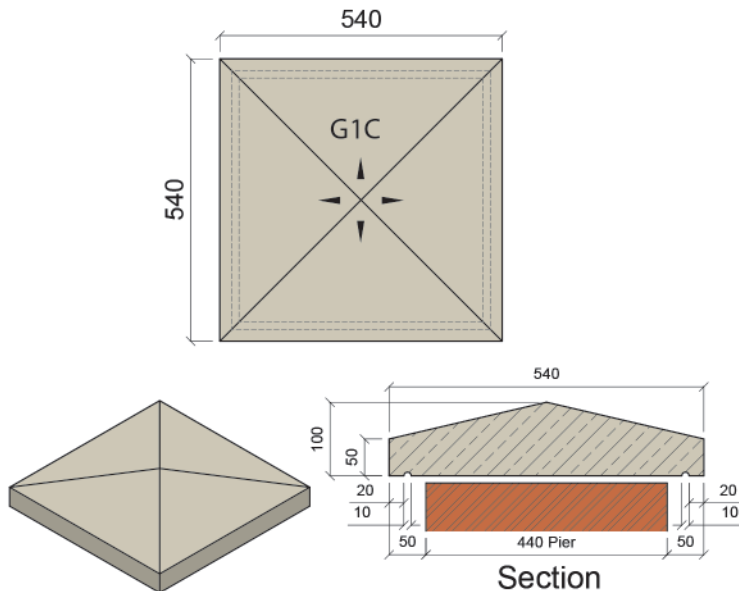
G1A 4 Times Weathered Pier Cap, 315x75/50mm Section



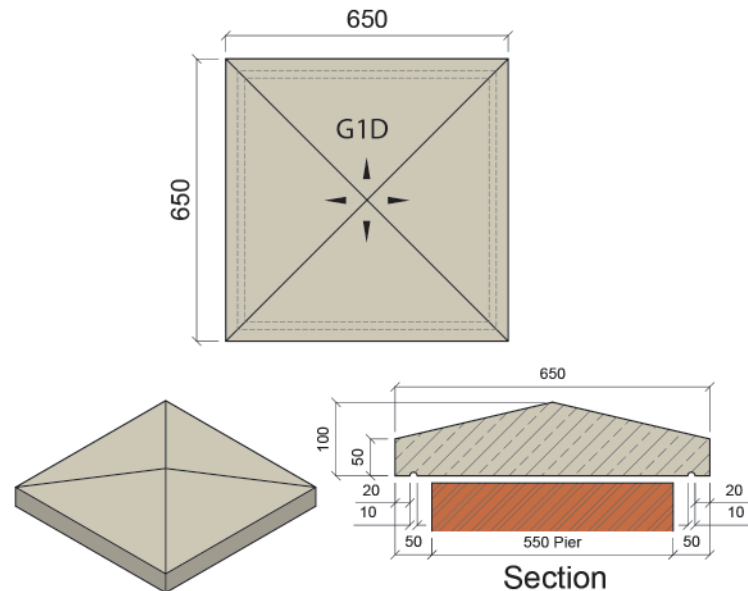
G1B 4 Times Weathered Pier Cap, 430x75/50mm Section



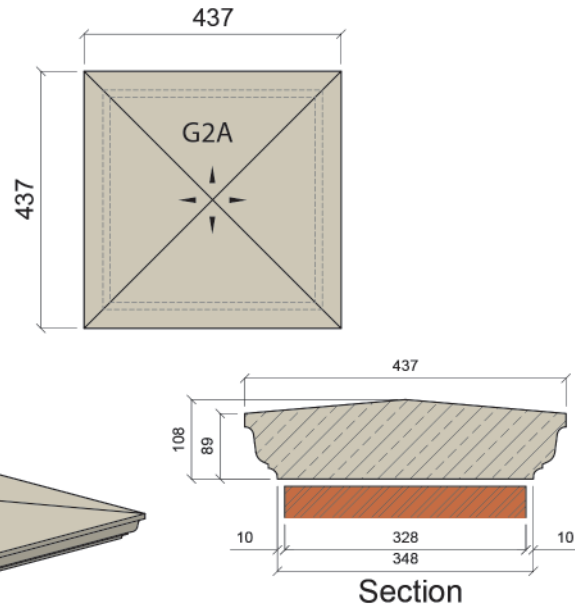
G1C 4 Times Weathered Pier Cap, 540x100/75mm Section



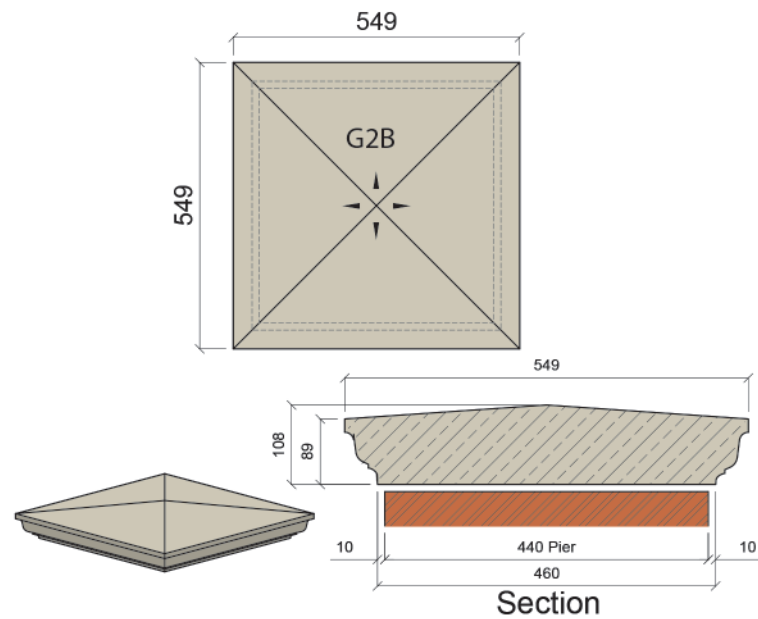
G1D 4 Times Weathered Pier Cap, 650x100/75mm Section



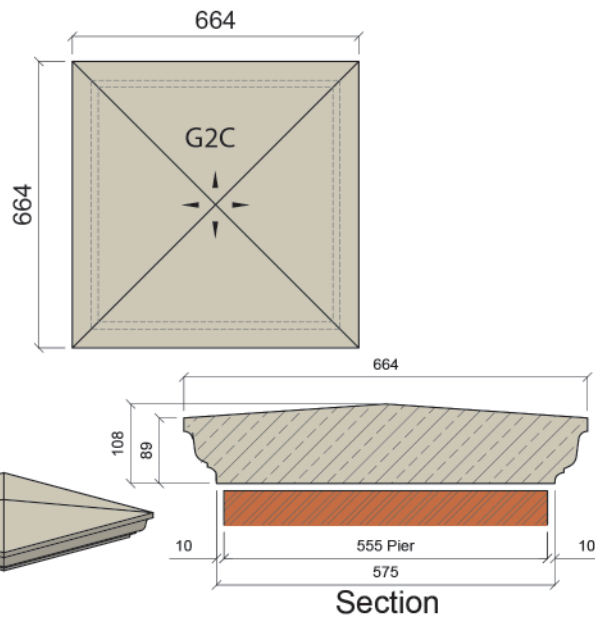
G2A Moulded Pier Cap, 437x108/89mm Section



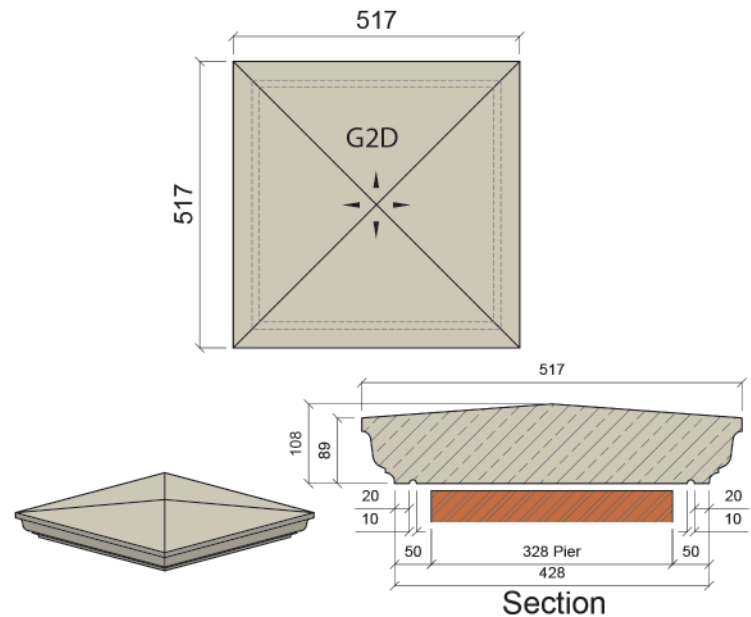
G2B Moulded Pier Cap, 549x108/89mm Section



G2C Moulded Pier Cap, 664x108/89mm Section

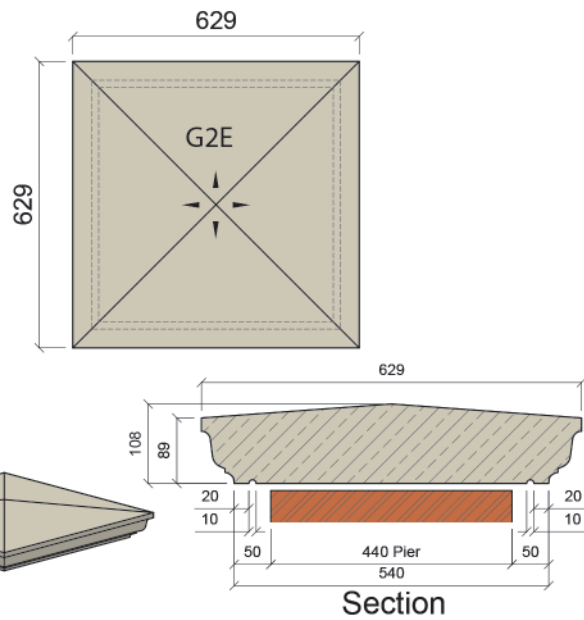


G2D Moulded Pier Cap, 517x108/89mm Section

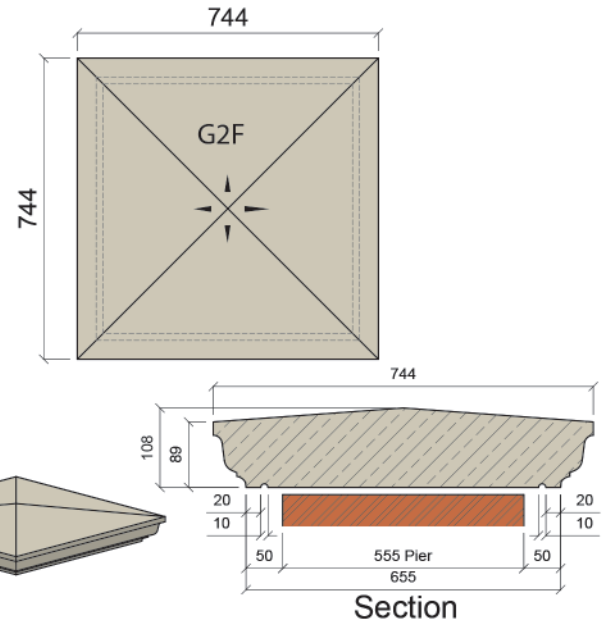


Pier Caps

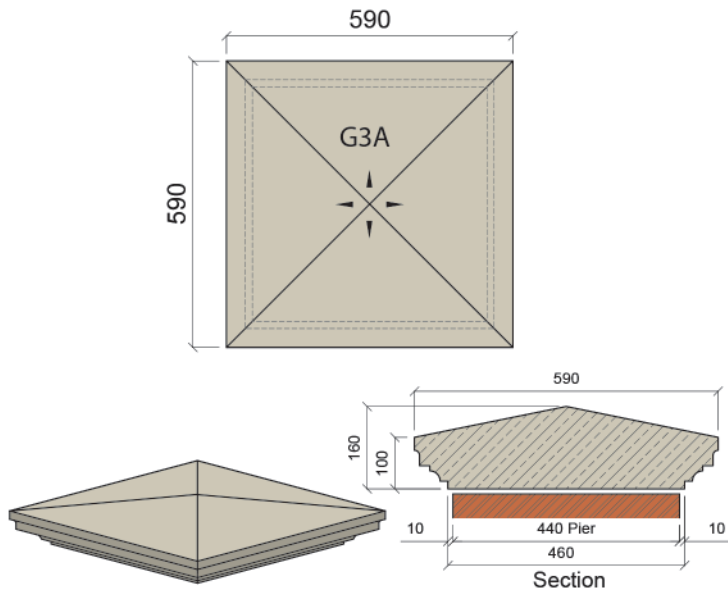
G2E Moulded Pier Cap, 629x108/89mm Section



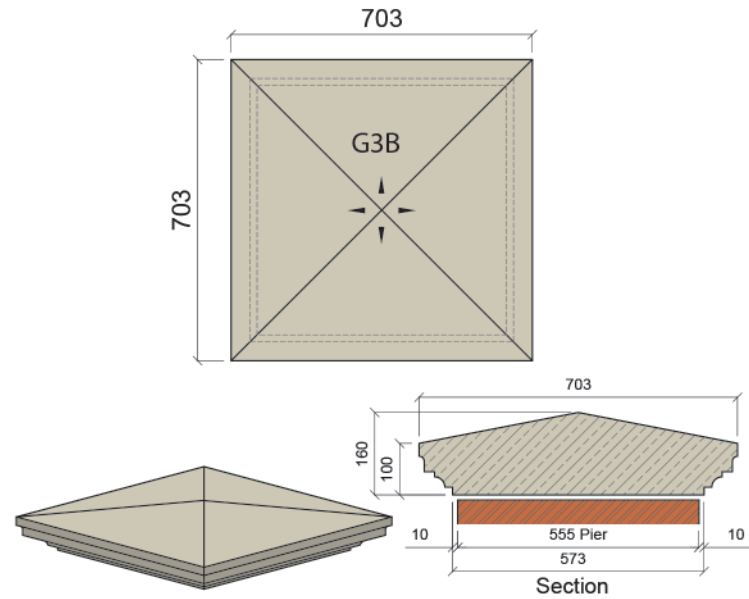
G2F Moulded Pier Cap, 744x108/89mm Section



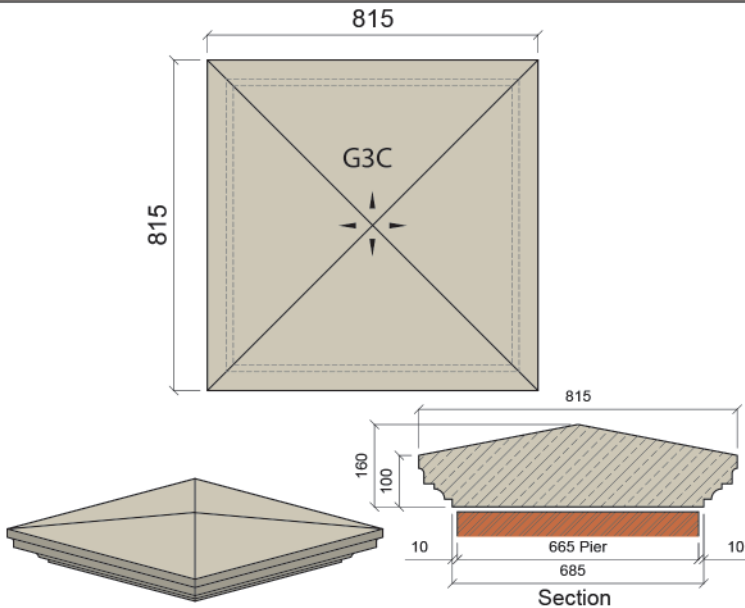
G3A Moulded Pier Cap, 590x160/100mm Section



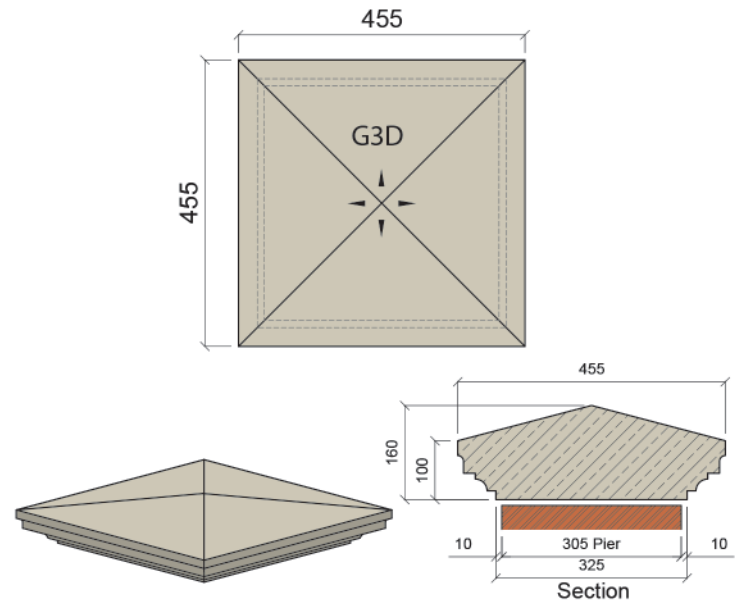
G3B Moulded Pier Cap, 703x160/100mm Section



G3C Moulded Pier Cap, 815x160/100mm Section

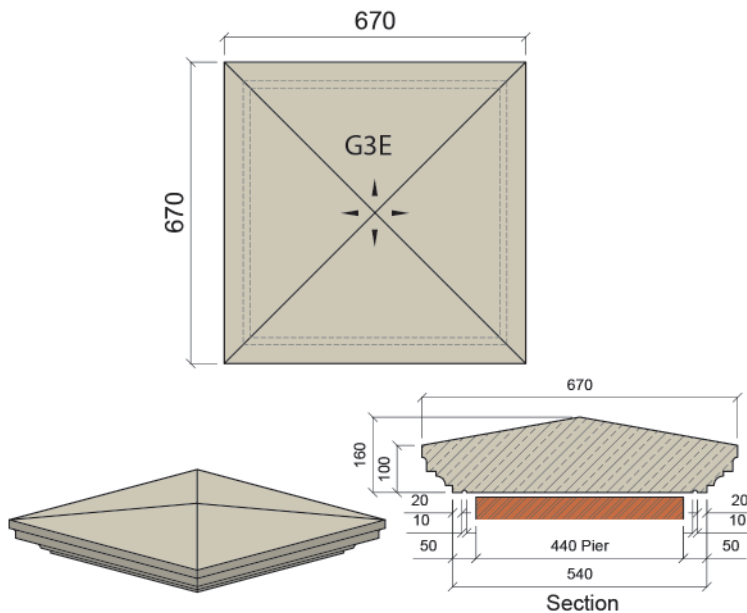


G3D Moulded Pier Cap, 455x160/100mm Section

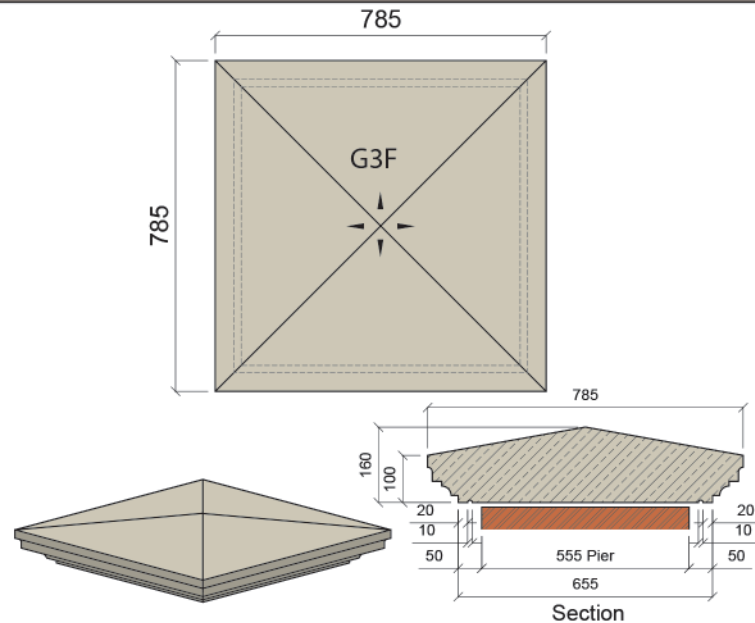


Pier Caps / Spheres

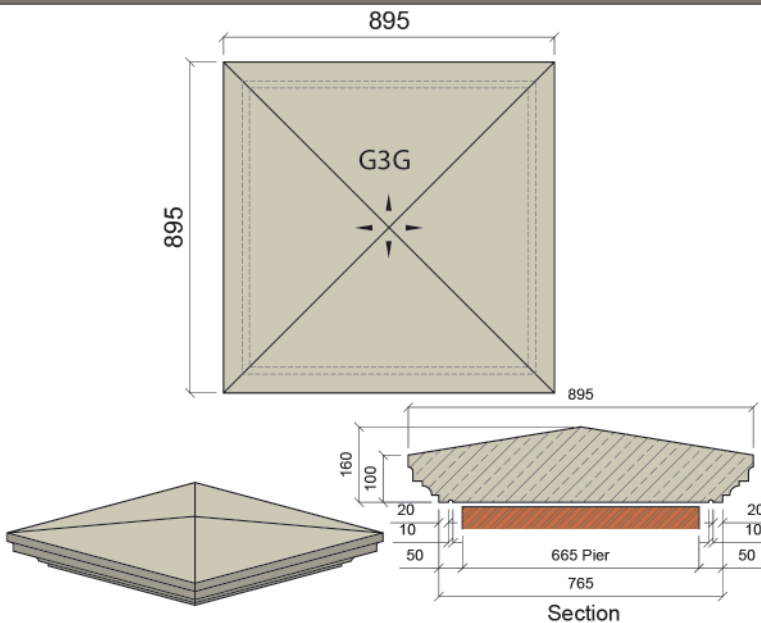
G3E Moulded Pier Cap, 670x160/100mm Section



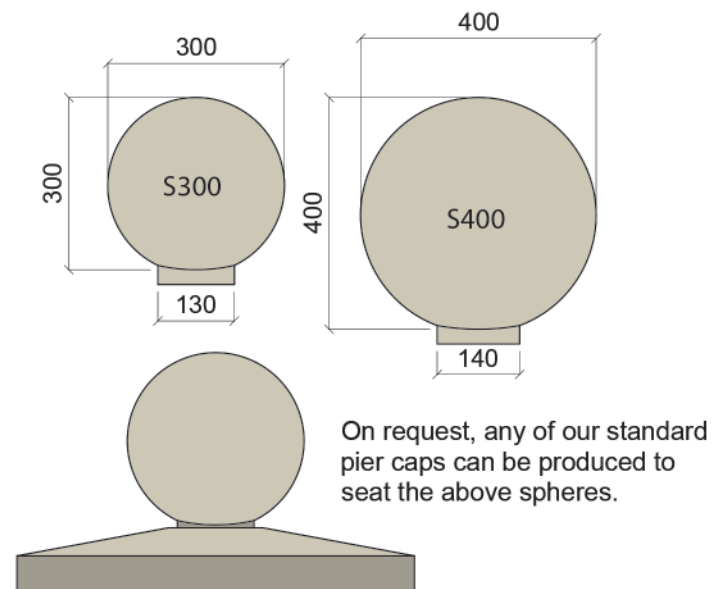
G3F Moulded Pier Cap, 785x160/100mm Section



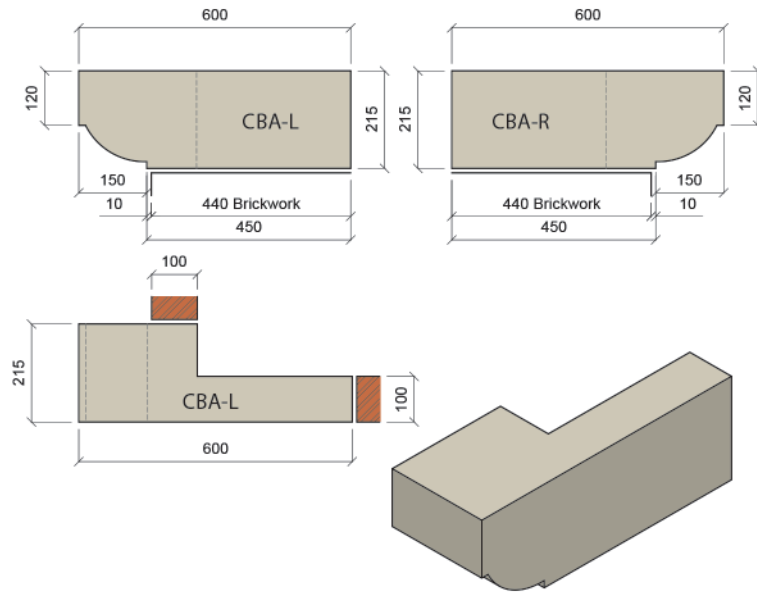
G3G Moulded Pier Cap, 895x160/100mm Section



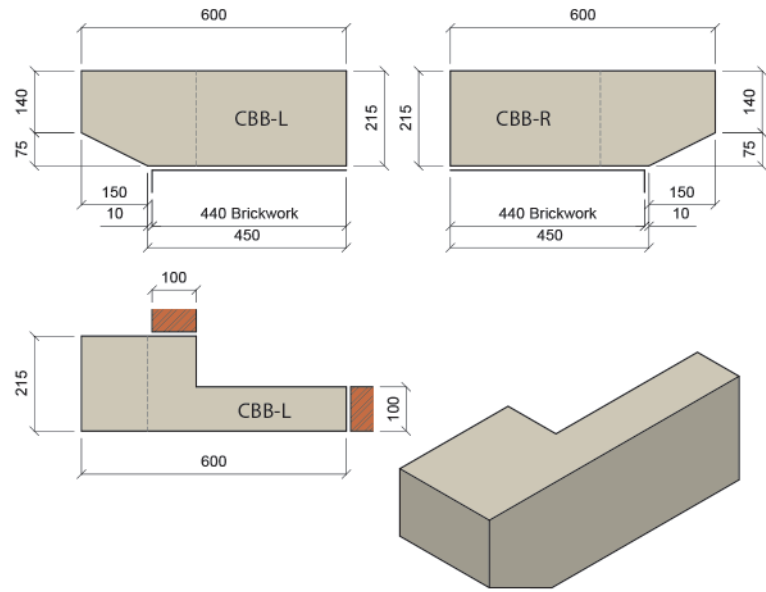
S300 & S400 Pier Cap Spheres



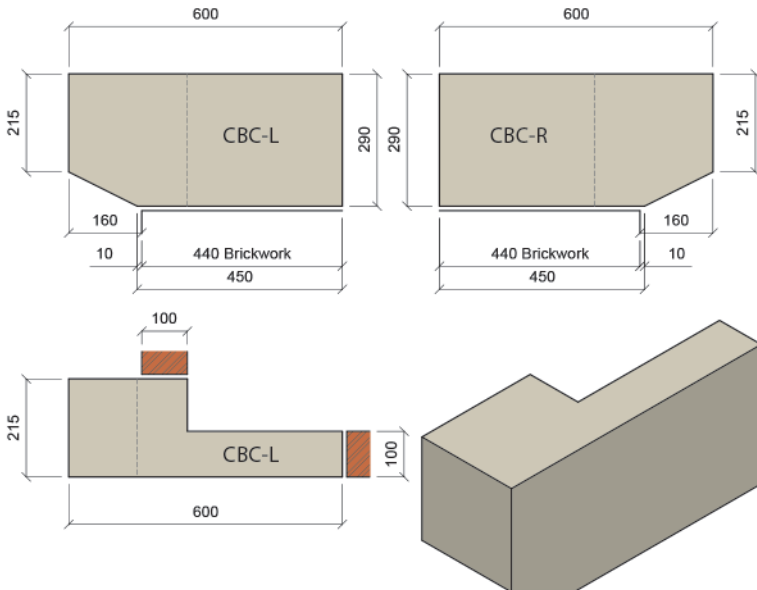
CBA Corbel A, 215x215mm Section



CBB Corbel B, 215x215mm Section

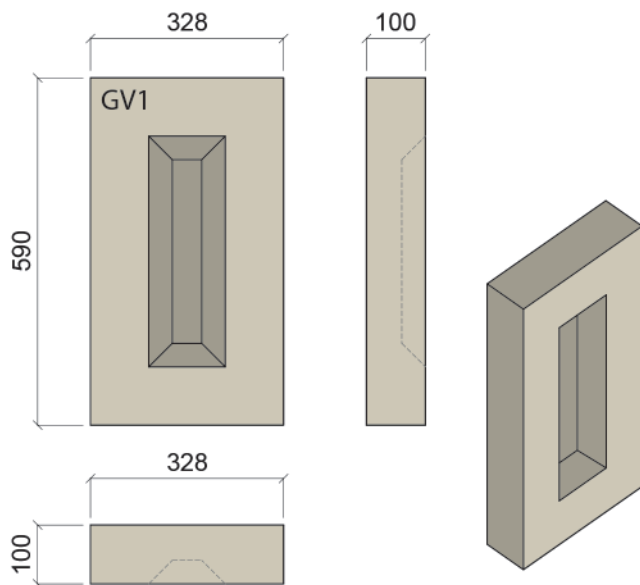


CBC Corbel C, 215x290mm Section

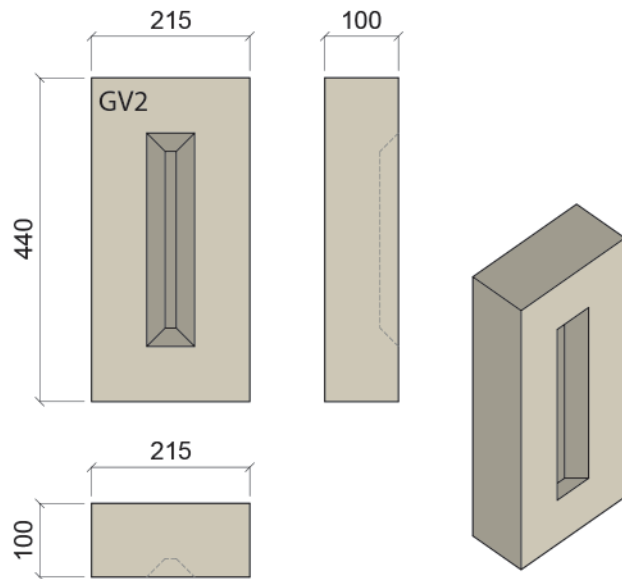


Gable Vents

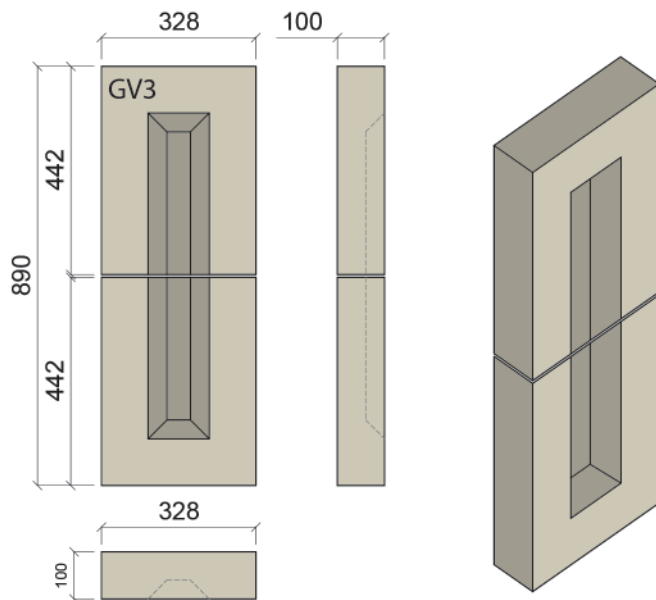
GV1 Gable Vent, 100x590mm Section



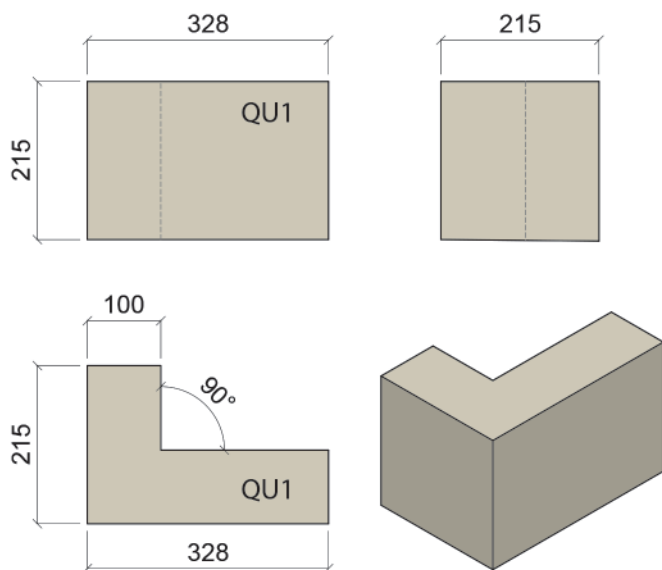
GV2 Gable Vent, 100x440mm Section



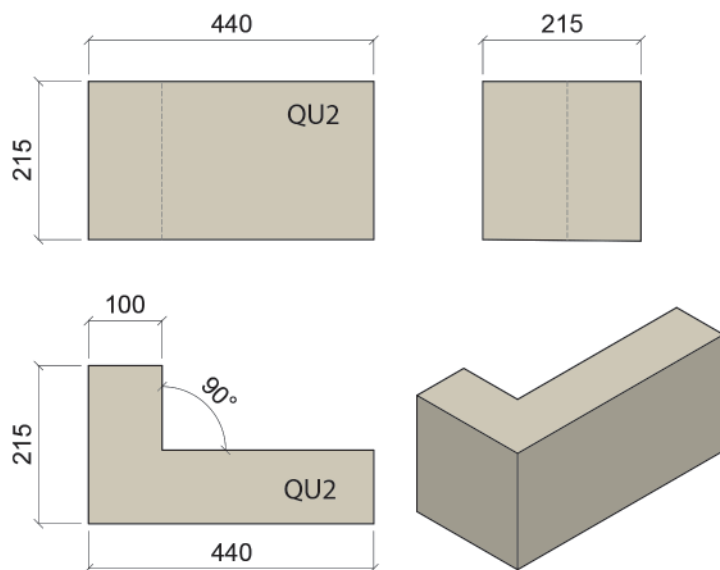
GV3 Gable Vent, 100x890mm Section (2 Pieces)



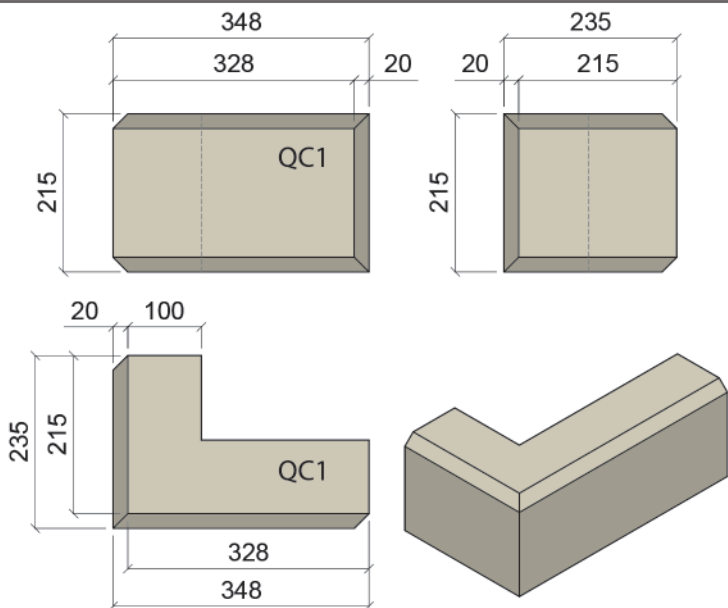
QU1 Plain 90° Quoin, 100x215mm Section



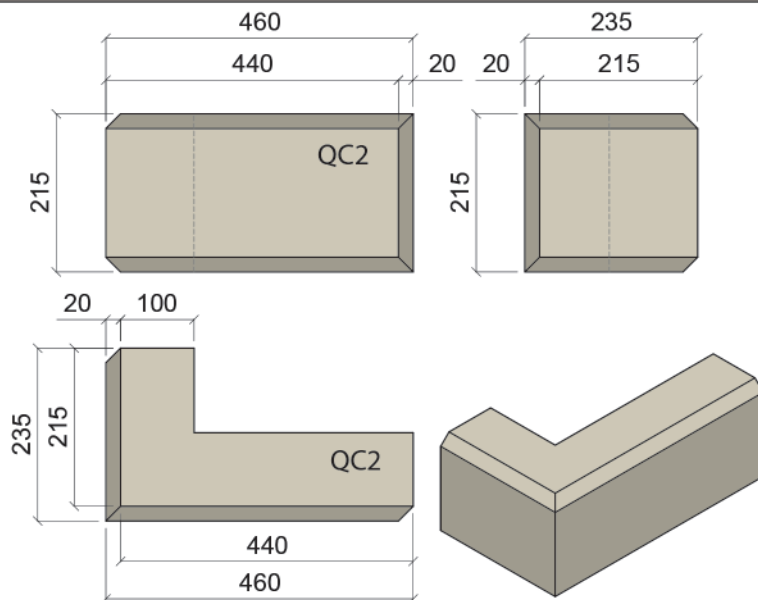
QU2 Plain 90° Quoin, 100x215mm Section



QC1 Chamfered 90° Quoin, 120x215mm Section

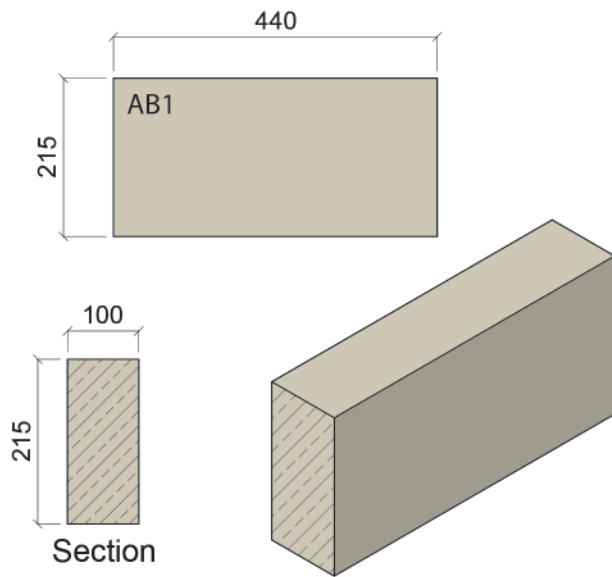


QC2 Chamfered 90° Quoin, 120x215mm Section

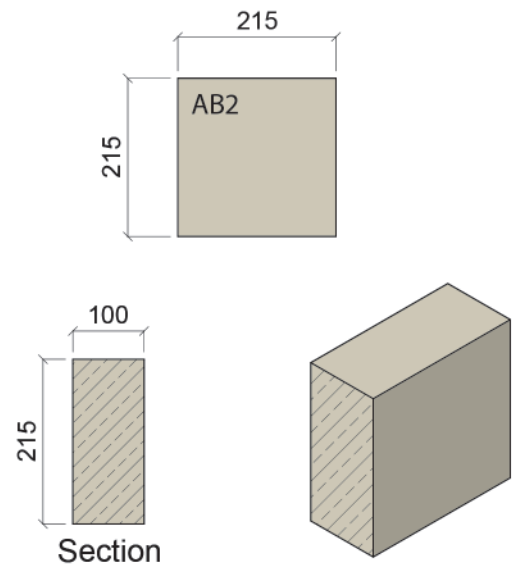


Ashlar Blocks

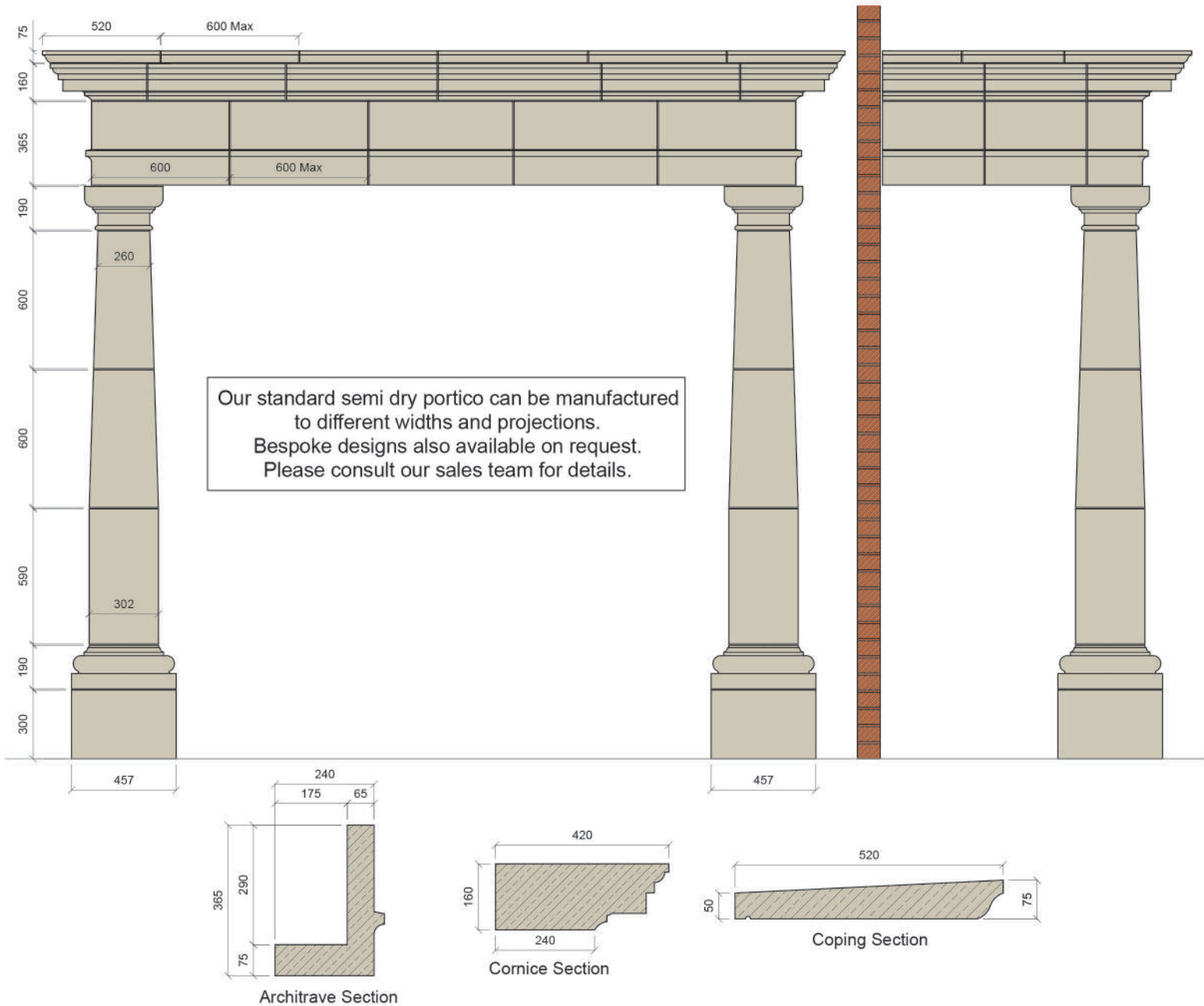
AB1 Plain Ashlar Block, 100x215mm Section

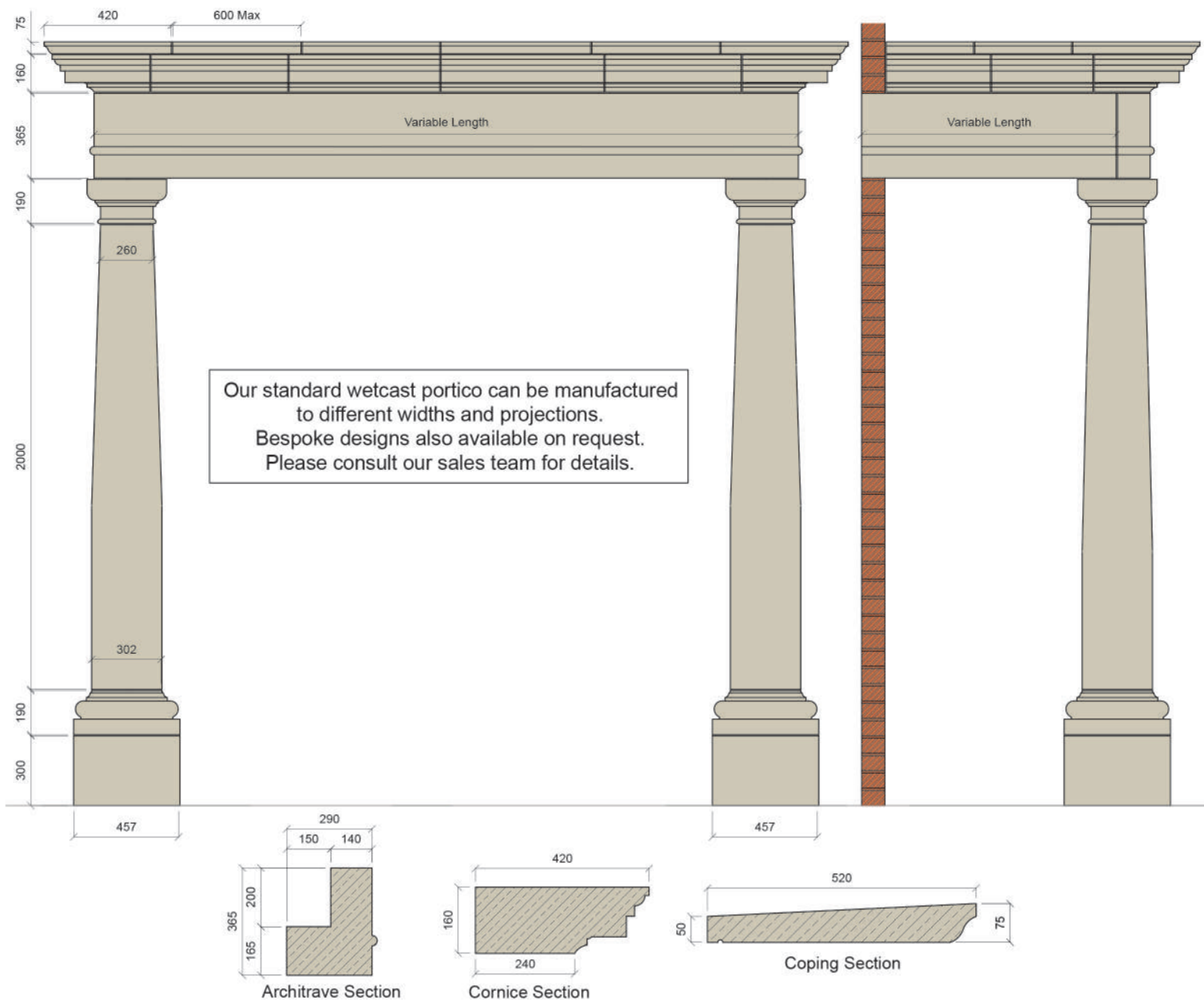


AB2 Plain Ashlar Block, 100x215mm Section

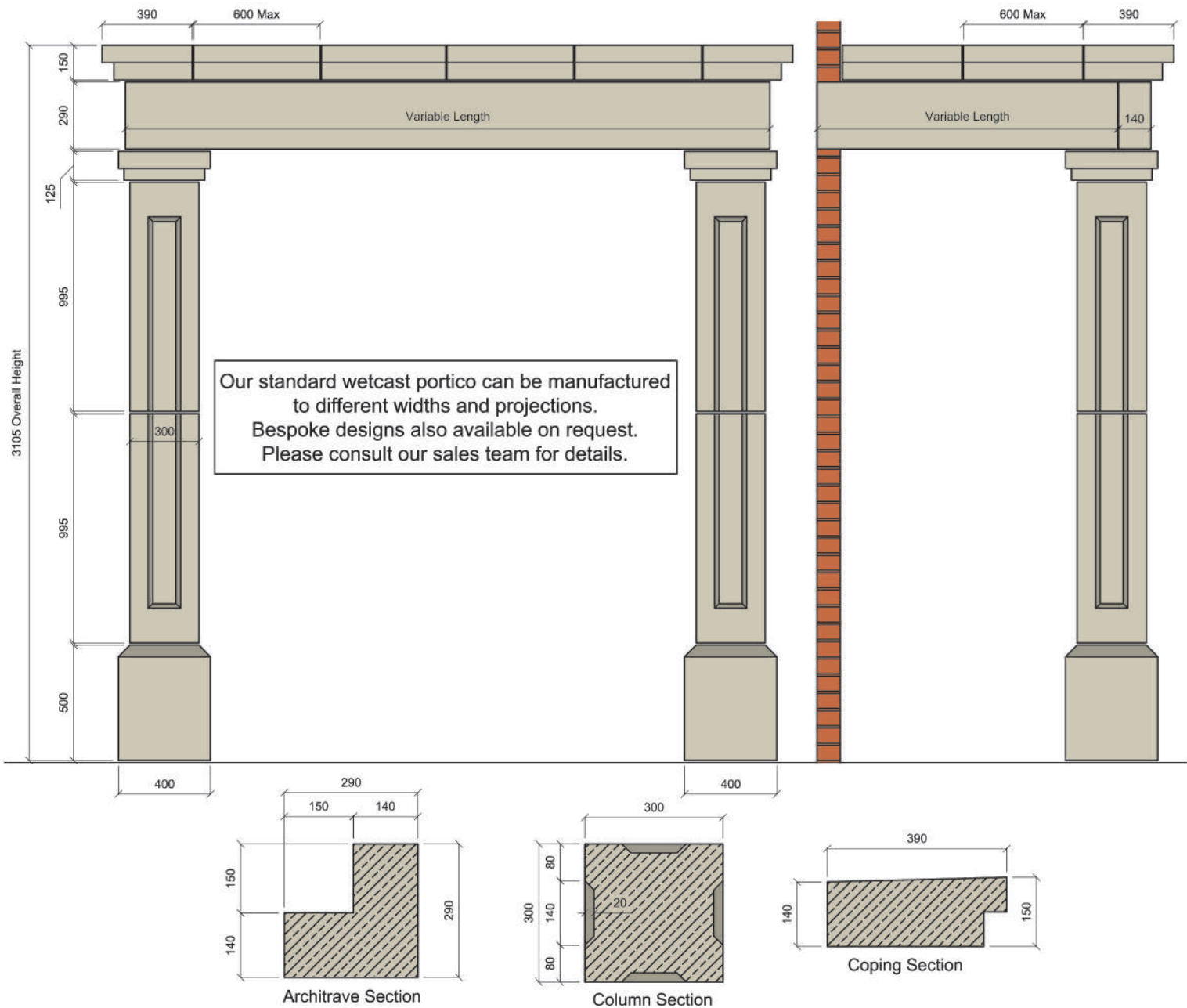


Standard Portico - Semi Dry Material



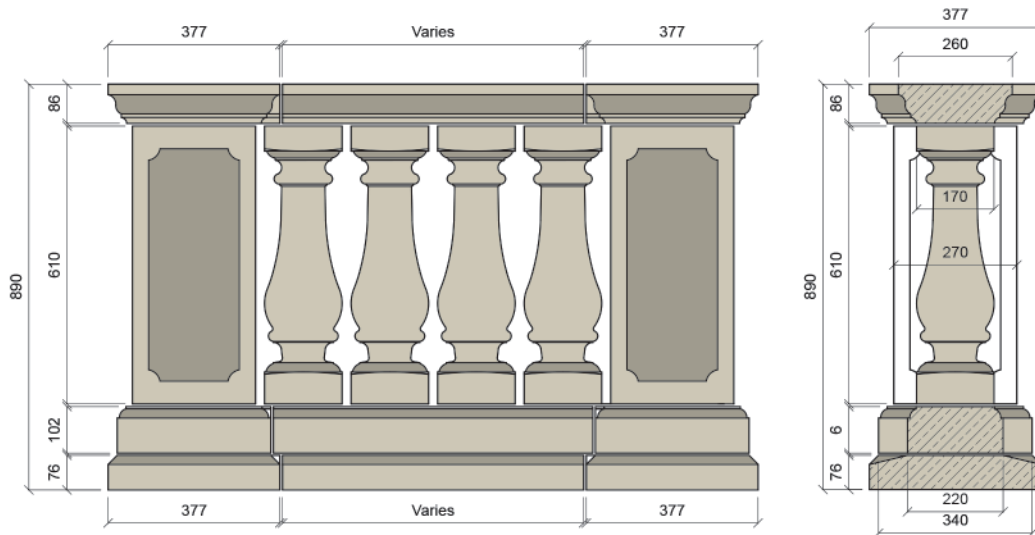


Square Column Portico - Wetcast Material



Balustrades

Standard Balustrade Components



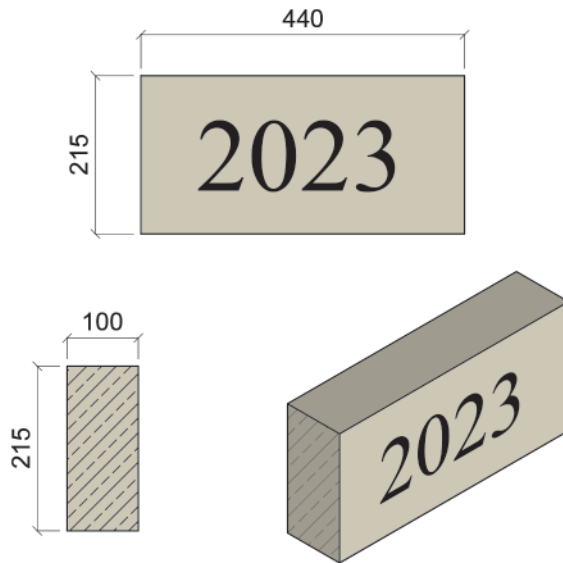
Runs of balustrades should include a pier unit at least every 4 metres
Please contact our sales office for balustrade enquiries

Section

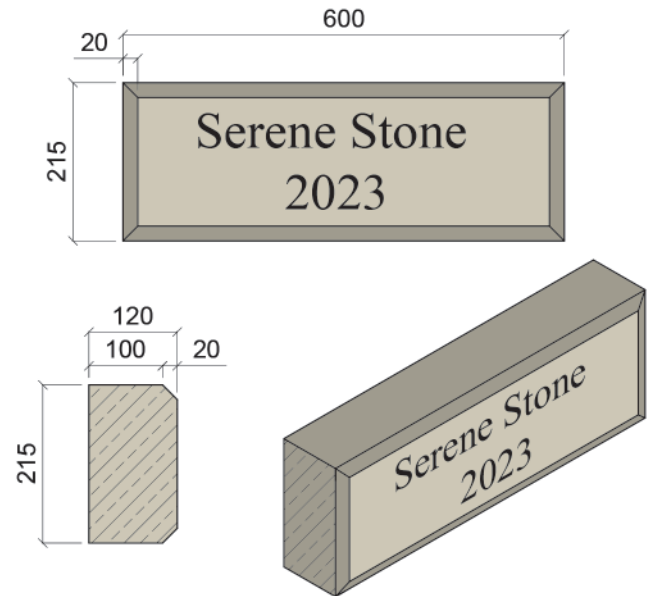


Date & Namestones

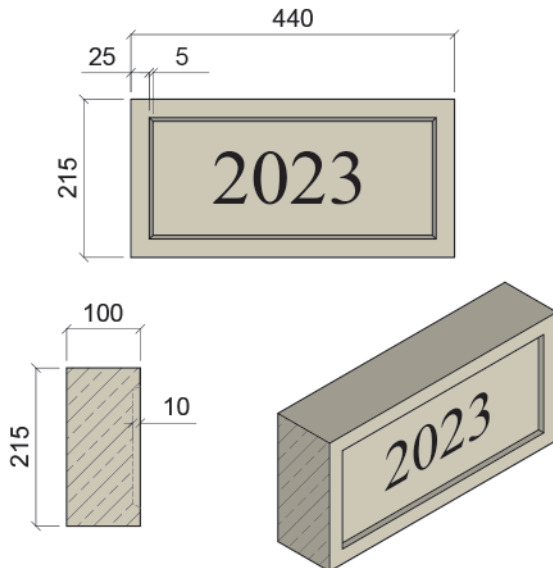
PDS1 Plain Date/Name Stone, 100x215mm Section



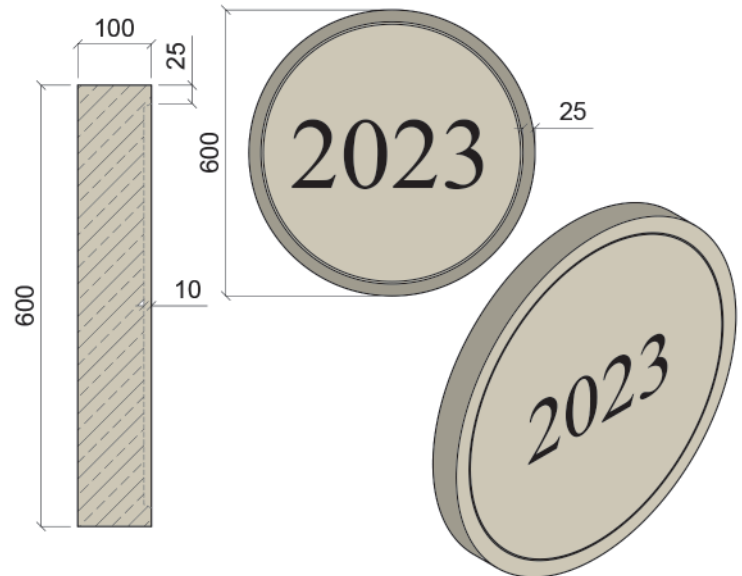
CDS1 Chamfered Date/Name Stone, 120x215mm Section



RDS1 Recessed Date/Name Stone, 100x215mm Section



CCS1 Recessed Date/Name Stone, 100x600mm Section



Cast stone should only be fitted by suitably experienced operatives. The following general precautions should be observed.

General

During construction it is advisable to protect finished working using appropriate gauge polythene sheeting. This prevent mortar drips, mastic paint and other construction materials staining or adhering to the cast stone. Mortar in particular is very difficult to remove. Every care should be taken to prevent the contamination of stone units.

Unprotected scaffolding poles, planks etc. should not be supported by cast stone items. Protect items removed from the storage area before use. Take normal frost precautions during cold weather. Brace construction to prevent damage to freshly assembled materials. Protect the top of all work at the end of each days work to prevent the ingress of water contamination.

Laying

All units should be laid and adjusted to final position whilst mortar is still plastic. Mortar exuding from joints should be cut away without smearing the face units.

Bedding & Jointing

Typically, cast stone is designed to be fitted with 5-6mm joints between units. Locating holes for dowel joints (if applicable) should be completely filled with an appropriate material, such as fresh mortar. Do not leave pockets that could collect water.

During hot, dry weather, the faces should be lightly sprayed with clean water to reduce suction, otherwise a dry powdery joint may occur.

When bedding cills, it is prudent to 'end bed' only, i.e mortar is placed under the stooling and joint/s only. This allows the cills to flex slightly and reduces the chance of cracking. If the cills need to be levelled, a length of timber should be used to spread to force along the length of the cill, before tapping the cill gently into position, taking care not to damage the edges of the stone unit. Once the cill has bedded and the mortar has gone off, the void under the cill can be pointed. Failure to follow this practice may result in cills cracking across their girth.

Fixing

Due consideration to the position and type of fixing to be used should be given at the design stage, members will advise on suitable applications for the various fixing options. In many cases fixings are included as a matter of process. Ties can be purchased from us or the relevant tie manufacturer.

Cutting

Our cast stone units are designed to minimise on-site cutting. If it is unavoidable, units should be cut with a diamond tipped masonry saw. Pencil mark on a line for the intended cut. Using the diamond tipped blade, start the cut on the faced side of the stone, creating a cut/groove no deeper than 10mm. Finish the cut from the rear/unseen face of the stone. This will help to avoid the material flaking as the blade comes out through the seen face.

Once cut, units should be brushed down to remove any dust.

Final Treatment

Brush down stone units and remove any mortar spots using a stiff, non-metallic brush.

Palletised deliveries of cast stone should always be unloaded using forks, not slings, scaffold poles etc.

Pallets should be stored on flat, level and dry ground – at a safe distance from other trades.

Pallets should NOT be stacked under any circumstances.

Remove shrink wrapping carefully, using a sharp blade. Pulling the shrink wrapping off too quickly without due care, may result in the stonework being damaged.

It is important that open pallets of cast stone are re-covered to prevent the ingress of water, dirt and dust. Where possible, the interior packing material should be re-used when units are removed from the pallets, to protect exposed faces.

Do not at any time stack units face to face without an appropriate interface protection material.

Remember that cast stone can very easily be damaged by transport or mobile plant moving around the site area.



Maintenance, Cleaning & Repairs

Cleaning

It is very difficult to remove mortars and contamination from surfaces of cast stone. It is for this reason that every effort should be made to avoid contamination.

The removal of mortar from the surface can be effected by physically removing as much of the mortar as possible using a semi-stiff, non-metallic brush, followed by mild acid washing.

Once all contamination has been removed and stonework acid washed, a final wash down using clean water should be performed to avoid further aggressive action by the acid.

Cleaners

Contamination due to cleaning of higher courses of brickwork or other materials should be avoided. Advice should be sought before carrying out this type of work.

Oil and grease can be removed by using a chemical degreaser. As with all treatments, this should be tried on a small, non visible area first to investigate any colour shade variation that may be caused.

If unsure, please contact our technical department prior to performing any cleaning.

Repair Work

In many cases it is possible to repair chips etc. The recommended techniques vary and advice should always be sought. It should be noted that repair work is normally carried out with material mixtures similar to those used in the original product and will take time to weather to the colour of the item being repaired.

Note: We recommend the use of specialist companies for cleaning and repair work. Please ask for details. Should you feel confident enough to perform the repair yourself, the below guidelines should be followed.

Repair mix can be requested from our sales office. Repair mix supplied should be mixed with WHITE CEMENT at the below ratio.

Ratio 1:5 (White Cement : Pointing Mix)

Mix as for pointing (see separate guide). Use a small amount of PVA with the water. A small amount of PVA and water may also be applied to the damaged area. Avoid contact with the surrounding stone, as staining may occur. Bonding agent should be diluted in accordance with the manufacturers instructions.

Bloom (efflorescence) may occur if the repair mix used is too wet. Treat this as standard efflorescence. A light rub with dry sand paper will help.

To perform small repairs, ensure the damaged area is clean and contains no contaminants. Use proprietary cleaning materials is required. If acids are used, follow manufacturers instructions and wear all recommended safety equipments. Take care to thoroughly wash all acid from the stone prior to commencing repair.

Using a trowel or similar, press the repair mixture into the damaged area and leave the mix slightly proud of the stone face.

Once completely dry, use a fine grade carerundem block with copious amounts of water to rub down the repair until level with the stonework face. Avoid rubbing down any undamaged areas of stone.

Once the damaged area has been prepared, repaired and rubbed down, a good wash off with water will help the appearance of the repair.

Please note that the area treated may take time to weather in with the existing stonework. If the repair is carried out on a ready weathered unit, it may be necessary to clean the whole unit to achieve a better finish. Use a proprietary cleaner following recommended guidelines.

Finally, to ensure the water tightness of the repair, it is prudent to seal with a silicon material. Care must be taken to select the correct silicon, as some products can affect the appearance of the stonework. Suitability tests are recommended.

Note: This is issued as guide only and Serene Stone Limited will accept no responsibility for it's implementation.

Mortar

It is vital that the correct grade of mortar is used when installing cast stone products. It should be noted that mortars used during installation of stonework is often different to that used in surrounding brickwork. Failure to check and ensure correct grade mortar is used can result in cracks appearing in long units, due to differential movement. The cracks are usually of little structural significance but are unsightly.

Plain sand and cement mortars are not recommended. Mortars must be able to resist frost and develop durability fairly quickly, however the strongest mortars are not always the best. An overly strong mortar can sometimes concentrate the effect of any differential movement.

Care should be taken when proportioning the material, making allowance for the bulking effect of damp sand, as all properties are by volume. The use of a gauge box is recommended for batching.

Mortars containing lime are particularly recommended, as they offer a certain self-healing action. To improve the water repellent quality of the joining in exposed conditions, proprietary water proofers may be added to the mortar. Generally, the mortar should never be stronger than the material it is bedding. The following ratio is suggested for stonework mortar: 1:1:6 (Cement : Lime : Sand).

Pointing

Sufficient pointing mix will be included with your delivery free of charge. Pointing mix supplied should be mixed with WHITE CEMENT at the below ratio.

Ratio 1:5 (White Cement : Pointing Mix)

It is very important that only white cement is used, as this gives the correct colour to match the stonework supplied. Follow British standard recommendations as to the depth of pointing (usually a minimum of 15mm).

Excessive use of water will cause 'bloom', if this occurs, wait until the pointing is dry and rub the joint lightly with fine sand paper. Avoid rubbing the stone, as this will deter from the appearance. Proprietary water proofers may be used to enhance the properties of the mortar.



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